THEORIES OF MULTIPLE INTELLIGENCES AND LEARNING ASSESSMENT FOR DEEP LEARNING IN HIGHER EDUCATION

by

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DECLARATION

I hereby declare that the thesis submitted for the Doctor Educationis degree to the University of Johannesburg, apart from the help recognized, is my own work and has not previously been submitted to another university or institution of higher education for a degree.

Signature: 

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ABSTRACT

This thesis reports on an action research project carried out in a Private Higher Education Institution and relates to the contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning. It is argued that theories of multiple intelligences, while having been widely applied to teaching, have not been meaningfully applied to the assessment of learning or to the promotion of deep learning. Therefore, the problem for research was that insufficient consideration has been given to the possible contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning, and that there is a gap in the application of those theories to the assessment of learning. Consequently, the purpose of the research was to examine the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning.

The first aim of the research was to consider the assessment of learning and to demonstrate how deep learning may be promoted through assessment. Secondly, the research explored the potential contribution of theories of multiple intelligences to the assessment of learning; while the third aim considered the demands of deep learning and theories of multiple intelligences in relation to assessment. The fourth aim was to propose a theoretical framework for assessment for the promotion of deep learning in the context of theories of multiple intelligences; while the fifth aimed to derive related principles. The final aim was to apply the derived principles practically to a course of study. The theoretical framework for the research was built on a study of the literature relating to the assessment of learning, deep learning and theories of multiple intelligences.

As the researcher was a practitioner, developing educational practice, a practitioner action research design was utilized, enabling the location of the research within a specific educational context and allowing for the development of a specific response to the research problem. Practitioner action research was particularly advantageous because it allowed for the improvement of practice, as

well as the generation of new knowledge with respect to the assessment of learning, deep learning and theories of multiple intelligences.

Drawing the study of the literature and the empirical research together, the research findings were that theories of multiple intelligences have a contribution to make to the assessment of learning; learners were aware of and appreciated the variety available in assessment items; learners need clear guidance with respect to technical requirements for assessment options; theories of multiple intelligences make a positive contribution to the construction of assessment items that promote deep learning; and assessment that is shaped by multiple intelligences contributes to the promotion of deep learning in certain learners.

The scholarly contribution of this study lies in that it has developed the application of theories of multiple intelligences to the assessment of learning in a manner that contributes to improved practice with respect to the assessment of learning in general and specifically to the promotion of deep learning through the assessment of learning, with application to both the higher education sector in particular and all education in general.

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1.1 INTRODUCTION

The research reported on in this thesis relates to the ongoing challenge to promote deep learning in higher education, considering how that may be achieved through the assessment of learning in the context of the theories of multiple intelligences. The research had its genesis in my own lecturing experience at a Christian higher education theological college, where my lecturing focused on Biblical Studies and Practical Theology, including Youth Studies. It was given further impetus by my associated responsibilities as a Head of Department, Dean of Students and periodic Acting Principal, together with an active responsibility in the administrative function of the college. What I present is a report on research that specifically examined the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning; paying attention to the assessment of learning, deep learning, and theories of multiple intelligences. Based on a careful consideration and examination of these areas, I derived a theoretical framework for the assessment of learning for deep learning in the context of the theories of multiple intelligences, and then practically applied the framework to one course of studies in my higher education setting (*course* otherwise referred to as a unit, subject or another synonym, depending on context).

This first chapter serves to introduce and orientate the reader to the research. To this end, attention is given to the context of the research, the research problem, the purpose and aims of the research, defining key concepts, discussing my role in the research, an overview of the research design and methodology, and then presenting an overview of the research report.

1.2 CONTEXT OF THE RESEARCH PROJECT

In presenting my research, this section will describe the personal context of my research as the immediate setting, together with the South African education

context as the broader setting. The personal context is important, as it is the context in which I was motivated to carry out my research; while the South African context is the context within which all educators in South Africa were required to function during the time my research was conducted. Consequently, both contexts are important to an understanding of the significance of my research.

1.2.1 The researcher's personal experience

I have been involved in private Higher education for over ten years, initially lecturing at a registered Christian theological college in South Africa, The Baptist Theological College of Southern Africa, BTCSA (www.btc.co.za), which awards qualifications up to a 480-credit Bachelor of Theology degree. I now lecture at a private Christian theological college in Australia, The Queensland Baptist College of Ministries, now known as Malyon College (www.malyon.edu.au). BTCSA was the setting I was in at the time of this research. In 1996, when I started lecturing at BTCSA, the College's learner body was reasonably homogeneous, the majority of the learners being well-educated white males training to serve as senior pastors or youth pastors in Christian churches, while some were training for work in Christian missions. Over the following years the make-up changed radically with the learner body becoming very heterogeneous within a period of about five years. This heterogeneity is seen in terms of age, cultural group, educational background and gender, together with the reasons for studying at the College. Overall, the age range expanded to 18-60, the cultural make-up became reflective of South African cultural groupings, educational background ranged from grade 7 to post-graduate professional degrees (entry routes were established for applicants who had not passed grade 12 with *Matric exemption*), female student numbers passed 20% of the learner body, and reasons for study broadened significantly.

Teaching a homogenous group that had generally received a solid secondary education made the perpetuation of the typical approach to education relatively easy. By typical approach, I am referring to the overwhelming experience of many learners in higher education of a learning experience that was and is made up of two main constituents; namely, the lectures and the assessment, which is mainly written research assignment and examination based. In such a setting, most

learners achieve at a reasonable level; however, this should not be taken to imply that such learners enjoyed their learning experience nor that the approach to learning and assessment was the most beneficial. Within the typical approach, assessment tends to be characterized by the reproduction of material, most commonly in written form; for example, examinations, tests, assignments, essays and written reports. With reference to assessment, Sternberg and Grigorenko (2003:207) observe:

> More and more, educators are recognizing that many children, including gifted children, fail to live up to their potential. There can be a number of reasons for this failure, one of which is that the way in which the students are taught and, often, assessed in school does not enable them to learn and perform in an optimal way.

While Sternberg and Grigorenko are referring to schooling, it is arguable that the same critique can be applied to higher education. Previously, Brown, Race and Rust (1995:83-84) had argued:

> Perhaps the most powerful criticism that can be levelled at traditional approaches to assessment is that students' grades or degree classifications depend too much on a limited set of abilities, including:
>
> - their skill at delivering written exams against the clock
> - their ability to 'keep their cool' under time pressure and in an unfriendly environment
> - their skill at writing stylishly, over and above the actual content.

In many fields of study, certainly those that parallel the studies at BTCSA, such as those that fall into the Arts faculties of many universities, it is generally the exception for learners to be given the opportunity to be assessed in other forms (such as practicums and oral assessment). Sternberg (2007:20) describes the situation by relating his own experiences in a first-year introductory psychology course, "The main means of teaching was lecture, and the main assessment of performance was a set of tests that measured our recall and basic understanding of the facts taught in the course." Personally, I felt a degree of dissatisfaction with the way in which I was lecturing and assessing, with both being shaped by the way

in which I was lectured and assessed, but did not have any sense of how I might change my own practice.

However, this began to change as the learner body became more heterogeneous and the variety increased. The changing circumstances challenged me to question the way in which I was lecturing and assessing; realizing that as someone involved in higher education, I did not have any formal training in education and was very much on a personal journey of discovery and growth. As is common for many people who become lecturers in higher education, the college's assumption was that I would simply *know what to do*. This meant that I never received any formal or intentional equipping and training for the role that I would fulfil as a lecturer. The only intentional training that I had previously received was in the South African Air Force, where I had completed a three month Air Traffic Control Instructors' training course. That course included a three week component on teaching practice and theory, while the rest of the time focused on the actual lecturing for and training of Air Traffic Controllers. While this was exceptionally valuable, it was limited in scope and only taught me how to lecture and examine content. This meant that, when I commenced as a lecturer at BTCSA, I simply followed in the footsteps of my own experience as a learner, modelling the lecturers and methods that I had previously experienced and observed.

Not only was I dissatisfied with the way in which I was lecturing and assessing, focusing on the course content and the learners' subsequent written reproduction of the same, but I was also challenged by the increasing variety amongst the learners. Within the variety of students were three groups that particularly stood out and that may be described as the *English non-first language learners*, the *'academic' learners*, and the *'non-academic' learners*. While appreciating that these three groups may not apply in other contexts, this was a marked change in my setting; especially as the previous typical student was an English speaking person who had received a reasonable education. The English non-first language learners were those who were studying in English, which is the College's medium of instruction, but for whom English was a second language at best (these students often having been the recipients of inferior schooling). The 'academic'

learners, with an academic orientation (Entwistle, 1991:¶2) and generally from an advantaged schooling background, were those who found the academic requirements easy to master and meet; while the 'non-academic' learners, often coming from disadvantaged schooling backgrounds, generally found the requirements difficult and often failed to meet the minimum standard, usually a 50% pass mark. While learners within these groups could overlap, the three broad descriptors remain valid for my particular setting. Considering these groups, and acknowledging that the essential content of academic study at a higher education level cannot change, I began to ask the question as to whether change could be made at the point of the assessment of learning.

It seemed to me that the English non-first language learners sometimes simply needed the *space and time* to adapt to the demands of study in English. However, they never had this time as most of the assessment items demanded a high level of English ability from the beginning. The 'academic' learners, while meeting the typical demands of higher education with relative ease, often seemed to be bored with their assessment requirements; for some, completing the requirements was almost too easy. Thirdly, the 'non-academic' learners were often those who were studying because it was required by their church or denomination, but they were not always able to respond adequately to the academic requirements of the college as a higher education institution (for example, many Christian groups require at least a first higher education degree for entry into vocational ministry); Entwistle (1991:¶2) refers to learners such as these as having a vocational orientation. Interestingly, it was this last group that prompted my initial rethinking regarding the assessment of learning. Amongst these non-academic learners I discovered other abilities (for example, musical and practical abilities) which led me to initial experimentation with other forms of assessment, including the use of drama, music and models as means of assessment. By the time I commenced the research being reported on in this thesis, I had also experimented with role-play, practical work, and reporting on visits to places of interest for assessment purposes.

Amongst these endeavours, I had evaluated the archaeology component of a Biblical Studies course by requiring the students to research an artefact related to

the Bible, then to utilize no less than three sources in the construction of a 3-D model of the given artefact. On another occasion, the students were required to prepare a dramatic item (such as a short play, poem or song) based on a particular passage of the Bible that was being studied. I had also required learners to visit relevant places, report on them and reflect on their experiences; one such visit was to the Apartheid Museum in Johannesburg as part of an African Realities course. While it may be argued that such assessment would not be regarded as appropriate for higher education, the assessment items were the means by which deeper learning and understanding could be developed. For example, one of the aspects taught with respect to archaeology was that it was not an *exact* science. By requiring the learners to access no less than three sources, they were able to discover that principle, as they endeavoured to present an appropriately constructed model. In other words, the educational end goal was not the artefact, it was the development of a deeper appreciation for and understanding of biblical archaeology. The learners could have been required to study the material and write either an assignment or an exam; however, the construction of the artefact enriched the learning experience and enabled practically gifted learners to express their learning in a medium in which they were strong.

Consequently, this research was positioned as a deliberate and intentional personal endeavour to develop and expand my early efforts in an alternative approach to the assessment of learning; being, at that stage, unaware of the concept of deep learning. I had also begun to reflect on a possible role for theories of multiple intelligences in higher education, to which I had been exposed through my wife who had taught at a primary school where a multiple intelligences approach to learning and teaching had been implemented. During the pre-reading for my research, I was exposed to the concept of deep learning and again began to consider its significance for the context in which I was lecturing.

1.2.2 The South African educational context

In addition to my personal experience in the classroom, I was also drawn into the broader South African educational context, as I was required to contribute to the

College's initial responses to the changes in the South African educational landscape. The new political dispensation following the first democratic elections in South Africa in 1994 saw a number of significant developments in education, including higher education, in South Africa. Two of those developments had a significant impact on private higher educational institutions, such as BTCSA. The first was the intentional introduction of a South African version of Outcomes-Based Education (OBE) as the key philosophical and practical approach to all education in South Africa. As a consequence of this, Private Higher Education Institutions (PHEIs) were placed under enormous pressure to frame all teaching in an OBE structure, and these institutions were left with no option but to restructure all their material in an OBE format. Enforcement was effected through the Council on Higher Education's (CHE) institutional and programme accreditation processes, in which PHEIs could lose accreditation in the event that they failed to adhere to the stipulated conditions and requirements. The second was that whereas PHEIs had been previously sidelined in the South African higher educational realm, structures were put into place whereby such institutions would be permitted to offer degrees for the first time and move to an educational equality with state institutions, particularly universities. This meant that many PHEIs, which had received little attention and recognition from government authorities, were brought into the mainstream of higher education. Together with that came the reality that private institutions which had essentially only been answerable to themselves were now subject to the requirements of the government and educational authorities; something, for which many, BTCSA included, were ill-prepared (for example, BTCSA did not have a single staff member who had any focused education or teaching qualification).

This was concretely experienced as I participated in the College's submissions to the South African Qualifications' Authority (SAQA), followed by subsequent submissions to the Council on Higher Education's Higher Education Quality Committee (HEQC) and to the South African Department of Education (DoE). As a private college, we were first required to present significant documentary evidence of our programmes of study, qualifications and courses to SAQA, all in OBE format, which was very challenging and very much a hit-and-miss affair, as our administrative and lecturing staff had only rudimentary experience in

educational administration and management, with none having any formal training. This was later followed by the required responses to the demands of the HEQC and South African Department of Education, both at programme and institutional level; again, something for which none of the BTCSA staff was properly equipped. Amongst all these challenges and demands, I was particularly challenged by the mandated move to OBE. Although this was only part of the new demands facing the College in general and lecturers in particular, it was significant in that it both affirmed aspects of my early reflections and thinking on assessment, whilst also compelling me to take those processes forward. OBE had taken centre stage in the South African approach to education, and is the framework within which much of the expectation of the HEQC and South African Department of Education is located. As a result, together with other colleagues in private higher education, I was required to implement the OBE approach. The demands that were applied to the PHEIs (resulting in some shutting down) were never applied with the same rigidity and rigor to state higher education institutions.

One of the key aspects of OBE is the emphasis on *outcomes* which learners are expected to master in order to be regarded as having met the minimum requirements for a given unit of study. OBE, therefore, has a direct impact on the assessment of learning, as it is the goal of assessment in OBE to determine the degree and extent to which the learner has mastered the given outcome. B. Malan (1997:30) advances the emphasis by stating, "… the key word in [OBE] assessment … is demonstration. In [which] … it is up to the learners … to demonstrate their knowledge, ability, competence or proficiency, and it is up to the assessors to judge the quality of such demonstration." As such, OBE has the stated aim of assessing outcomes; however, the traditional approach to assessment generally remains limited to the *read and write* forms of assessment. As a result, many learners find themselves not only assessed in relation to a stipulated outcome or outcomes; they are also assessed, albeit indirectly and unintentionally, on their ability to *read and write*, as these bear heavily on the quality of the relevant assessment item or items that they complete. This means that the learners who are not *good* or *excellent* in reading and writing are disadvantaged by the medium by which they are required to demonstrate their mastery. While acknowledging that the ability to communicate is critical in higher

education, the question is whether the extent of the *de facto* intrusion of the form of assessment is desirable. The reason that this is an important consideration is that "… a key role of assessment … is determining whether or not the intended outcomes have been attained" (South African Department of Education, 1998:12).

Based on the above, I would argue that it is necessary to develop assessment strategies that focus as directly as possible on the outcome being assessed, acknowledging that the impact of the form of assessment cannot be removed completely. The Department of Education (2002:8) indicates the need to move in this direction as they comment that "… there are many practical ways in which … assessment [can be] … planned, structured and conducted…. [For example], learners can be [permitted] … to demonstrate outcomes through other methods of assessment." This concern for the nature of assessment from the South African context merged with the concerns of my personal context gave rise to the research problem.

1.3 THE RESEARCH PROBLEM

In presenting the research problem, introductory consideration will first be given to the three main factors contributing to the research that I carried out (further discussion follows later). These were the challenges of the assessment of learning, the demands of deep learning, and the contribution of theories of multiple intelligences. Based on a consideration of these three factors, I will present my research problem and research questions.

1.3.1 The challenges of the assessment of learning

As outlined in the preceding section, I encountered the challenges of the assessment of learning as presented by both my personal experience of a heterogeneous learner body and by the intended purpose of assessment in OBE. The first contributed to my own consideration of the generally limited nature of the typical approach to assessment, particularly the too common narrow focus on *read and write*. The second, assessment in OBE, challenged my thinking on the impact of the forms of assessment on the actual assessment of stated outcomes. Based

on these, I began to question the demands of the assessment of learning as presented by the typical approach to assessment and by the nature of assessment in OBE. I was motivated to consider the possibility of a more effective manner in which to respond to these demands by changing the way in which learning is assessed. This challenge deepened as I began to consider the demands presented by deep learning.

1.3.2 The demands of deep learning

Ramsden (2003:48-49) defines deep learning as that learning in which "… the students are concerned with integrating the new material with their personal experiences, knowledge and interests…."; in contrast, surface learning is learning "… in which alien material is impressed on the memory or manipulated unthinkingly with the intention of satisfying assessment demands." It is apparent from these definitions that deep learning may be argued to be *subjective* to the learner, in that the material being studied is integrated into the broader knowledge base and existing knowledge of the learner. In contrast, surface learning may be said to be *objective* to the learner, as the learner focuses only on what is required to complete assessment items and to meet the stipulated assessment criteria. Understanding this fundamental distinction between deep and surface learning introduces the relationship between a learner's approach to learning and the assessment of learning (it should be noted that the terms *deep and surface learning* and *deep and surface approaches to learning* are often used interchangeably in the available literature).

If the assessment of learning has the potential to influence learners to surface learning, then it may equally be argued that it has the potential to motivate learners to deep learning. This view is consistent with the view of Boud (1995:37) who argues:

> Every act of assessment gives a message to students about what they should be learning and how they should go about it. … Students will learn to adopt surface approaches to study in some circumstances and will adopt deep or strategic approaches in others. In so doing they will be prompted partly by the forms and

> nature of assessment tasks. … [therefore] … assessment is the most significant prompt for learning.

The proposed relationship between the assessment of learning and the learners' approaches to learning is consistent with the arguments presented by Ramsden (2003:67) and Rowntree (1977:1) amongst others. Consequently, this relationship is of significance to both educator and learner; particularly where the educator is endeavouring to promote deep learning. On the basis of this understanding, I questioned how the assessment of learning might be constructed to promote deep learning. Furthermore, as a result of my earlier exposure to the theories of multiple intelligences, I reflected on the potential contribution of these theories to the promotion of deep learning through the assessment of learning.

1.3.3 The contribution of theories of multiple intelligences

As indicated, I felt that a possible response to the demands of the assessment of learning (as discussed in 2.4) and the challenges of deep learning may be found in theories of multiple intelligences. These theories were introduced and promoted particularly in Howard Gardner's early and very popular *Frames of Mind* (1983), and in some circles the more highly regarded academic work of Robert J. Sternberg, *A Triarchic Theory of Human Intelligence* (1985). In different ways, these men propelled the theories of multiple intelligences into the realm of education; at a popular level, Gardner has been more influential, although not without his critics. At this point, it is necessary for me to sketch the theories and briefly indicate how they may be utilized to promote deep learning through the assessment of learning.

The fundamental thesis of the theories of multiple intelligences is that the traditional understanding of intelligence as a single attribute is too limited and limiting. On this basis, the argument is postulated that intelligence is multi-faceted, and is to be examined as multi-faceted. If the theories are reasonable and different people are intelligent in different ways, then I would suggest that the theories of multiple intelligences have the potential to contribute in a meaningful manner to the promotion of deep learning through assessment. This view is

consistent with the view of many supporters of Gardner who express the view that learners should be afforded the opportunity to explain material in ways that are shaped by the different intelligences (Brualdi, 1996:¶18).

Despite this view few if any significant works could be found that intentionally apply Gardner's theory to the actual assessment of learning; one of the very few exceptions being Lazear's application in *Multiple Intelligence Approaches to Assessment – Solving the Assessment Conundrum (Revised)* (1999). At the commencement of my research, the same could be argued in relation to Sternberg's understanding of multiple intelligences. For example, Sternberg and Williams' edited work, *Intelligence, Instruction and Assessment – Theory into Practice* (1998), only briefly considers the actual assessment of learning. However, parallel to the commencement of my research, Sternberg has produced some work in the area (see, for example, Sternberg, 2004a & 2007 and Sternberg & Grigorenko, 2003 which will be referred to later). In Lazear's application, he has indicated how each of Gardner's proposed intelligences may be considered in the assessment of learning, focusing on the schooling environment. My concern with his application is that it is probably not suitable in the context of the demands faced by most educators, as he suggests that every learner must be afforded an assessment opportunity that matches their intelligence, as proposed by Gardner. The problem is that every learner needs to be catered for individually, something which is almost impossible in most educational settings. Although more significant work has been done on the significance of the theories of multiple intelligences for teaching, I would argue that there remains a gap in the application of the theories, in that little has been done in relation to the actual assessment of learning in terms that are reasonably applicable and manageable in the so-called average higher education setting. However, it is my contention that these theories have a significant contribution to make to both the assessment of learning and the promotion of deep learning through the assessment of learning.

1.3.4 The research problem

The preceding discussion has argued that the typical approach to the assessment of learning, focusing mainly on *read and write*, may be too limited and limiting,

particularly in the context of an endeavour to promote deep learning. In the light of this, I have argued that the theories of multiple intelligences may have a valuable contribution to make to the resolution of certain of the challenges and tensions in both the assessment of learning and the desire to promote deep learning. The research problem, then, was that insufficient consideration has been given to the possible contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning. In other words, there is a gap in the application of theories of multiple intelligences to the assessment of learning and in an examination of the role that theories of multiple intelligences may play in the promotion of deep learning through the assessment of learning.

1.3.5 The research questions

The research problem, as outlined above, generated the following questions which motivated and directed my research. The first concerned the relationship between the assessment of learning and deep learning, and asked how the demands of deep learning may be promoted through the assessment of learning. Building on this, the second question asked how the theories of multiple intelligences could be utilized to contribute to the assessment of learning, and in that to promote deep learning. Thirdly, answers were sought to the question, 'What principles may be derived from the demands of deep learning and the theories of multiple intelligences for the assessment of learning?' Consideration of these questions then elicited the construction of a theoretical framework for the assessment of learning for deep learning, utilizing theories of multiple intelligences. Each of these questions formed the shape of my research, especially in terms of the purpose and aims.

1.4 THE PURPOSE AND AIMS

Based on the research problem and related questions, the purpose, aims and objectives of my research were as follows.

1.4.1 The purpose of the research

The overall purpose of my research was to examine the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning.

1.4.2 The aims of the research

In relation to the first research question concerning the relationship between the assessment of learning and deep learning, my aim was *to examine the assessment of learning in general and then to demonstrate how the demands of deep learning may be promoted through the assessment of learning*. The second question asked how the theories of multiple intelligences could contribute to the assessment of learning, and in that to promote deep learning. This gave rise to two aims; namely, *to explore the potential contribution of theories of multiple intelligences to the effective assessment of learning* and then *to consider the application of the demands of deep learning and theories of multiple intelligences to the assessment of learning*.

Based on the second question, the third sought answers to the question, 'What principles may be derived from the demands of deep learning and the theories of multiple intelligences for the assessment of learning?' This gave rise to my fourth aim, namely, *to propose a framework for the assessment of learning for the promotion of deep learning in the context of theories of multiple intelligences.* Finally, a consideration of these questions then elicited the construction of a theoretical framework for the assessment of learning for deep learning, based on theories of multiple intelligences. In this context my final two aims were *to derive principles for the assessment of learning for the promotion of deep learning in the context of theories of multiple intelligences*, and then *to develop and practically apply the principles to one course of study in a higher education setting*. Together, the research questions and aims shaped the research that followed.

1.5 DEFINING KEY CONCEPTS

In the research the key concepts were *assessment of learning*, *deep learning* and *multiple intelligences*; these will be defined in this section. In addition to these key concepts, I will also define the secondary concepts of *higher education* and *Outcomes-Based Education*, as they are important components of the context of my research. An additional reason for this is that not all readers may be familiar with the South African context and setting, and this serves to assist them to orientate themselves meaningfully with respect to the research.

1.5.1 Assessment of learning

Forbes (2005:58) proposes that "… assessment is a process of collecting and interpreting evidence, in order to make judgements on the outcomes of predetermined processes or procedures in a system, towards achieving goals or objectives". In the assessment of learning the goal is to determine or establish the degree and extent to which learners have mastered the stated outcomes (to use the terminology of OBE). Therefore, the definition of Forbes may be adjusted to read: *The assessment of learning is the process in which evidence is collected and interpreted in order to make judgements on the learner or learners' progress towards achieving the stated outcomes*. This serves as the definition of the concept 'assessment of learning' in this study.

1.5.2 Deep learning

At this stage it is sufficient to emphasize two key aspects of deep learning. The first is that deep learning is an integrative process in which learners endeavour to integrate their learning into the broader, existing body of knowledge and understanding that they already have. Secondly, that there is an internal dimension to deep learning, in terms of which the learner endeavours to internalise that which is learnt, rather than to keep it at an objective distance (Ramsden, 2003:48). Consequently, *deep learning may be defined as that learning by which learners internalise and integrate that which is learnt into their broader, existing body of knowledge and understanding*.

1.5.3 Multiple intelligences

An appreciation of multiple intelligences lies in an initial reaction against the traditional understanding of intelligence as a single entity. In response to this more traditional understanding, the concept of multiple intelligences proposes that intelligence is a multi-dimensional entity which needs to be considered as such, arguing that *intelligence* should rather be regarded in terms of *intelligence**s***. As such, the resultant theories are referred to as *theories of multiple intelligences*; noting that there is no single theory of multiple intelligences. However, all theories have in common a suspicion or rejection of the narrow view of intelligence in favour of an argument for *multiple* intelligences. In a subsequent chapter, I will pay more detailed attention to these theories, particularly as expressed by Gardner (1983, 1993, 1999 & 2003) and Sternberg (1985, 1988, 1998, 2002, 2004a & 2004b).

1.5.4 Higher education

As higher education in South Africa is the specific context of my research, I define it in terms presented by SAQA (South African Qualifications Authority, 2009:np), "All learning programmes leading to qualifications higher than grade 12 or its equivalent in terms of the NQF, including tertiary education." At this level of study, Fuller and Chambers (1997:293) have argued that "... it can be expected that university courses will emphasise the *understanding* of subject matter, and TAFE [Vocational Education and Training, VET, in the South African context] courses will emphasise its *application*." The South African Qualifications Authority was required, by Act of the South African Parliament (1995) to establish a National Qualifications Framework (NQF), the objectives of which included the creation of an integrated framework for all learning achievements. The subsequently developed NQF (South African Qualifications Authority, 2005c) acknowledged three bands of education; namely, General Education and Training (GET), Further Education and Training (FET), and Higher education and Training (HET). Within these bands were eight NQF levels (South African Qualifications Authority, 2005c), with HET broken down as in Table 1.1, which was the construct in place at the

time of my research (see www.saqa.org.za for current structure and further information).

Table 1.1 Higher Education and Training

NQF LEVEL	BAND	QUALIFICATION TYPE
8	Higher education and Training	* Post-doctoral research degrees * Doctorates * Masters' degrees
7		* Professional qualifications * Honours degrees
6		* National first degrees * Higher diplomas
5		* National diplomas * National certificates

Based on the NQF, higher education is that which equates with Higher Education and Training. My empirical research focus rested on a course located in NQF level 6 (culminating in a Diploma in Theology, awaiting designation as a Bachelor of Theology) and also contributing to a level 7 qualification (Bachelor of Theology, awaiting designation as a BTh (Honours)).

1.5.5 Outcomes-Based Education

A consideration of Outcomes-Based Education (OBE) needs to appreciate that while the term may have come into more recent technical use, outcomes-based educational systems are not new, and that examples of such systems and models date back as far as AD500 (Spady, 1994:4). Spady (1994:24) maintains that OBE "… means focusing and organizing an education system around *what is essential for all students to be able to succeed at the end of their learning experiences.*" Consequently, OBE demands that a clear set of outcomes be established for any unit of learning, and that all teaching is shaped by those outcomes. Therefore, *Outcomes-Based Education is that approach to education that prioritizes the*

intentional stating of outcomes, and in which all teaching and learning is shaped by those outcomes.

1.6 RESEARCH DESIGN AND METHODOLOGY

While comprehensive attention will be given to the research design and methodology in chapter six, this section presents a basic description of design and methodology. As the research was carried out by me as a practitioner developing my own educational practice, I made use of a practitioner action research design. This enabled me to locate my research within my own context and related challenges by choosing a response, applying and evaluating it. Practitioner action research was particularly advantageous because it not only enabled me to improve my own practice, it also simultaneously enabled the generation of new knowledge in the area in which I was endeavouring to improve my own practice. Additionally, the cyclical nature of practitioner action research meant that I was able to commence my research 'out of' my existing educational practice, into my current situation, and then 'exit' with improved personal practice and potentially valuable new knowledge.

As my sample, I chose to carry out my research in my then lecturing context at BTCSA, working with a group of second level learners in a Biblical Studies course, *The Pentateuch*. In terms of data collection, my data was collected by means of questionnaires, interviews and a personal research journal; with the actual data collected at the commencement of, during, and at the end of my research cycle. The accumulated data was then analyzed by means of a content analysis of the data obtained in the learner questionnaires, interviews with learners and my research journal. Careful attention was given to ethical considerations, paying special attention to the issues of volunteer participation, privacy and confidentiality, alleviating harm and addressing the researcher-participant relationship. In addressing the challenges of rigor and trustworthiness I considered the challenges of accuracy, credibility, dependability and transferability.

1.7 MY ROLE IN THIS RESEARCH PROJECT

As I utilized practitioner action research, it is necessary to explain my role as a researcher and practitioner simultaneously in this research. As researcher, I had a responsibility to commit myself to the required rigor in particular; in other words, to ensure that I dealt with possible researcher bias. However, there was the challenge of being the practitioner at the same time. While carrying out the research as researcher, I remained the educational practitioner who was responsible both for the teaching of the chosen unit and to the learners studying that unit. In this regard, I was particularly challenged in two ways; firstly, by the existing relationship that I had with the learners. BTCSA is a smaller College, with the total learner number being 80-100, which meant that as lecturers we had closer personal relationships with the learners than might otherwise be the case. This situation was heightened by virtue of the fact that the learners were all equipping themselves in some way for Christian ministry and service, meaning that there was a deeper affinity between myself as lecturer and the learners. The second challenge arose from my personal desire to make a meaningful contribution to the learning experience of the learners. Having observed the significant challenges faced by many of the learners, there was a very real desire that my research would make a difference in the learning experience.

With respect to the nature of the relationship that I had with the students, I found that being aware of the challenge was the critical starting point. In that light, I responded in two divergent ways. The first was to endeavour to utilize the deeper relationship in a meaningful way, realizing that this could enhance the nature and quality of feedback received from the learners. The second was to ensure that an appropriate ‘objectivity’ needed to be maintained for the duration of the research. For example, I ensured that I did not discuss the research with the learners during the research period. The main way in which I endeavoured to ensure that was by limiting my research findings to that which the learners submitted in their questionnaires and in the personal interviews. While I kept a personal research journal, that was used mainly in the critique of the research, so avoiding any undue personal impact and influence on the research findings. In this way, I

endeavoured to maintain an acceptable tension between my roles as both researcher and practitioner.

1.8 OVERVIEW OF THE RESEARCH REPORT

This research report begins by presenting the context and problem of the research. Thereafter, I examine the three main concepts that form the foundation for my theoretical framework, including a consideration of their interrelationships and the proposal of principles for the assessment of learning for deep learning in the context of theories of multiple intelligences. The report then moves to the research design and methodology that I utilized in the application of the principles that I have proposed. I then discuss the actual research in terms of the process and empirical findings; thereafter, I conclude by presenting the broader research findings; including critiquing my research, considering its contribution and proposing a way ahead.

1.9 SYNTHESIS

This chapter has served to introduce my research, beginning with a description and explanation of the context of the research. In this, I have highlighted my personal experiences in higher education and placed that in the broader South African educational context. With that context in mind, I have presented my research problem and related research questions in the context of the three main contributing factors: the demands of the assessment of learning, the challenges of deep learning, and the contribution of the theories of multiple intelligences. Based on the research problem, I presented the purpose, aims and objectives of my research; and then presented definitions of three key concepts and two secondary concepts. Finally, I have presented an overview of the research report. In the following three chapters I will examine the three main theoretical concepts that shaped my research; after which I will present two chapters discussing the research design and methodology. Thereafter, I will discuss the research, empirical findings and broader research findings.

CHAPTER 2:
THE ASSESSMENT OF LEARNING

2.1 INTRODUCTION

As explained in the first chapter, the initial impetus for my research came from my personal experiences in higher education, especially with respect to the assessment of learning. In this chapter, I will be examining the assessment of learning in general, including assessment in the specific context of Outcomes-Based Education (OBE), as that was the specific context of my research. It needs to be noted that much consideration is being given to the assessment of learning in academic and educational circles (Atkins, 1995:25); appreciating that "... there is probably more bad practice and ignorance of significant issues in the area of assessment than in any other aspect of higher education" (Boud, 1995:35).

Specific attention will be given to the following key aspects of the assessment of learning: a basic definition of the assessment of learning; the aims of assessment, the requirements of assessment, types of assessment, and assessment in Outcomes-Based Education. The purpose of this chapter is, therefore, to answer the following key questions: 'How is the assessment of learning defined?'; 'What are the aims of the assessment?'; 'What are the requirements of assessment?'; 'What types and methods of assessment are available?'; and, 'What is the role of assessment in OBE?'

The main reason for a consideration of these questions is to establish a theoretical and practical basis on which an examination of the promotion of deep learning through assessment, with reference to theories of multiple intelligences, can be developed. In other words, whatever is developed in this research must be on the basis of a proper understanding of the assessment of learning.

2.2 A DEFINITION OF THE ASSESSMENT OF LEARNING

Most references to the assessment of learning or learning assessment are abbreviated to *assessment* and, for the purposes of my research, I will generally

make use of the abbreviated reference. While the meaning of *assessment* is broadly taken as understood, a basic definition is required for clarity in the context of my specific research. Generally, assessment is the means by which the educator will endeavour to assess the learning of the learner. Typically, in many higher educational institutions the emphasis of assessment is on the learners' ability to reproduce, in written form, the content of what was taught so that a mark or score can be produced (Entwistle, 1991:¶3-4). Describing the typical understanding of assessment, Sternberg (2006a:22) comments that "... our educational system is set up to recognize and reward individuals who excel in skills such as rote memorization. It also rewards students who are strong in analyzing and critiquing arguments." Practically, the most common way in which that is achieved in higher education is by means of the *reproduction* or *exam* approach to assessment; meaning that most assessment items are presented in written form and allocated a grade or mark. The result of this approach is that "... [most] assessment consists, essentially, of taking a sample of what students do, making inferences and estimating the worth of their actions [and allocating a grade or mark] ..." (Brown, Bull & Pendelbury in Luckett & Sunderland, 2000:100).

However, others move beyond the typical understanding and view assessment as the means by which the educator is enabled to gain a deeper insight into their learners' understanding, and to use that insight to improve their own teaching and the learners' learning. Ramsden (2003:177) defines assessment as contributing to "... a way of teaching more effectively through understanding what students know and do not know...." For Ramsden, and others, the emphasis in assessment tends to move from what the learners do or do not know, to how the educator may better teach based on an appreciation of what the learners have mastered. Walvoord and Anderson (1998:2) define assessment as "... the systematic gathering and analysing of information to improve student learning". This definition alludes to the twofold potential of assessment; namely, the evaluation of the student's progress and the improvement of teaching (and learning) practice. In the context of an outcomes-based approach to assessment, it is important to consider definitions such as that of Forbes (2005:58), "... assessment is a process of collecting and interpreting evidence, in order to make judgements on the outcomes of

predetermined processes or procedures in a system, towards achieving defined goals or objectives."

Based on these and other definitions (including Frye, 2006:¶3; Heywood, 2000:15; Lambert & Lines, 2000:4 and Siebörger & Macintosh, 2004:5), it is apparent that the focus of assessment should be both the learners' development and the improvement of teaching. Consequently, assessment involves an objective element, the assessment items, and a subjective element, the development of learners. This means that assessment "... can be thought of as occurring whenever one person, in some kind of interaction, direct or indirect, with another, is conscious of obtaining and interpreting information about the other person." (Rowntree in Luckett & Sunderland, 2000:100). Such information can then be related to both the development of the learner and the improvement of teaching; in other words, assessment is more than a focus on the assessment items that are allocated a grade or mark (Frye, 2006:¶4; Popham in Taylor, 2003:1 and Siebörger & Macintosh, 2004:5). Assessment focuses on the required assessment items; however, not as a means in themselves, rather as a *window* into the learner's immediate (at the time of assessment) grasp and understanding of the related and relevant development.

However, in the context of my research and internal and external restraints (including the Council on Higher Education and the Department of Education), while I would prefer to work with a definition that includes the broader spectrum of understanding, it was necessary to limit my working definition as follows: *The assessment of learning is defined as that process by which the educator endeavours to assess the extent to which a learner has mastered, or not yet mastered, a given outcome.*

2.3 THE AIMS OF THE ASSESSMENT OF LEARNING

The second question relates to the aims of the assessment of learning, and considers what the intended aims of the assessment of learning are; otherwise stated, 'Why assess learning?' Without a meaningful understanding of the aims of assessment, the educator will generally fall short in the intention to provide quality

education to their learners. A variety of proposals as to the aims of assessment are presented (including Brown et al, 1995; Elton, 1971:1; Gardner, 1993:178; Hutchings & Marchese, 2000:317; Lambert & Lines, 2000:4 and Taylor, 2003:42) which may be summarized under the following four main aims: to measure achievement, to motivate learning, to monitor progress, and to support learning.

2.3.1 To measure achievement

The most common aim for the assessment of learning is to measure achievement (Stringer, 2008:159), sometimes referred to as the evaluation of learning. The intention is to grade or mark the learners' submissions with the intention to score and rank the learners' mastery of that which they are expected to have learnt (Ebel, 1998:46). Traditionally, such measurement was carried out at the end of the course, sometimes during a course, having a summative role; "... to provide information about the level of pupils' achievement at points during and at the end of school [or a period of learning]..." (Lambert & Lines, 2000:4). It remains the experience of many learners that assessment is exclusively for the purpose of fulfilling this role; where learners are expected to master the set material, and are then assessed at the *end* to determine their achievement within the course or programme of studies. An occasional by-product of this aim is that of being able to utilize the results of assessment in the prediction of future performance (Elton, 1971:1). This aim is probably the one most commonly experienced by learners; however, that experience is often a negative one as it becomes apparent that for many learners the examination is also an assessment of their ability to write fast, to regurgitate facts, and to be concise (Logan, 1971:9). It is questionable whether such practices do properly measure achievement, as it commonly stands *outside* the learning process (Lambert & Lines, 2000:2); when, for example, an entire unit of study's assessment is wrapped up in a final examination which can contribute up to 100% of the learners' final mark for a given unit of study.

2.3.2 To motivate learning

A second aim of the assessment of learning has been seen in a gradual move away from viewing assessment solely as a means to measure achievement to an

understanding that a further, some would suggest primary, aim of assessment is to motivate learning (Ebel, 1998:46 and Gardner, 1993:178). Siebörger and Macintosh (2004:6) argue that "... assessment which does not motivate learners to learn nor tell them what they need to do in order to improve does not fulfil its educational purpose." This is a significant move for both learners and educators, in that the focus of assessment intentionally includes the subjective dimension of motivating learners to learn. One of the potential consequences of this aim is that learners will be less focused on achievement, and motivated to learn through the use of appropriate assessment methods and strategies. One of the key ways in which this has found expression is in the increasing use of formative assessment, together with summative assessment, as opposed to the exclusive use of summative assessment (see 2.3.3 and 2.5.1). As commented previously, however, most learners do not have a positive experience of assessment, and would arguably be slow to suggest that it has motivated them to learn. Many learners would probably argue that the only motivation that assessment gives them is to achieve their own academic goals, ranging from simply passing to achieving the highest possible mark, either personally or overall. This is illustrated by Logan (1971:8 *italics added*), speaking as a student, who makes the following observations regarding the traditional examination process:

> The three-hour exam system has produced in students two major attitudes. That is, they either regard it with dissatisfaction because of the coercive element or take a very calculated view of the process and, so as not to be examined on their learning, they work out mentally how best they can beat the system. In terms of an educationalist, *students are not involved in a continuing process of education; they are standing outside the whole process* which is judged by a final examination.

2.3.3 To monitor progress

A further aim of assessment is to monitor progress with a formative and summative purpose, "... to provide information about the level of pupils' [or learners'] achievements at points during and at the end..." (Lambert & Lines, 2000:4). The intention is to assist learners through the learning process by means of regular and deliberate feedback (Armstrong in Lazear, 1999:82 and Hutchings & Marchese, 2000:317). For many learners, the lack of feedback, both formal and

informal, is one of the most discouraging aspects of the learning experience. Gardner (1993:178) highlights the importance of this aim by emphasizing:

> It is incumbent upon the assessor to provide feedback to the student that will be helpful at the present time – identifying areas of strength as well as weakness, giving suggestions of what to study or work on, pointing out what habits are productive and which are not, indicating what can be expected in the way of future assessment, and the like. It is especially important that some of the feedback take the form of concrete suggestions and indicate relative strengths to build upon, independent of rank within a comparative group of students.

In other words, for assessment to monitor progress in a meaningful way, it should serve the needs of both educator and learner. This is particularly challenging in contexts where learner numbers are very high or where educators are pressurized by their overall responsibilities; often including lecturing a large number of courses, demands for personal research output and increasing administrative demands. In such contexts, the pressure to complete the lecturing of the course material and the marking of assessment items is sufficiently pressing, without introducing the aim of monitoring progress as well.

2.3.4 To support learning

In conjunction with the previous aim of monitoring progress is that of supporting learning (Brown et al, 1995:77; Siebörger & Macintosh, 2004:6 and Walvoord & Anderson, 1998:17). In terms of this aim, assessment can be regarded as *looping back* into the learning process of the learner; as SAQA (South African Qualifications Authority, 2005c:16) has proposed, “The purposes of assessment ... are increasingly understood as having the primary function of supporting learning”. In other words, as with the monitoring of progress, the supporting of learners should mean that assessment is not an end in itself, but a vital cog in the wheel of developing and nurturing the learning that is taking place (Lazear, 1999:81 and Taylor, 2003:42). This aim intends to develop the learner as a learner, rather than using assessment as a tool to highlight failures and shortcomings (Lazear, 1999:81). Such development may include the early identification of technical shortcomings (for example, in assignment writing or exam technique), and the

recognition that learners may not have grasped or understood particular material (for example, when a large number of learners are seen to struggle with something in a test).

Reflecting on the aims of assessment, I would conclude that in many cases only the first aim (to measure achievement) is used in common to all practice, while the remaining three are probably the exception rather than the rule. In the context of my research, this left me asking why this was the case. Certainly, the aims are good, even if the implementation is often weak. Does this mean that there is an inherent problem with assessment, or does it mean that the problem lies with the implementation of assessment? It was my intention to examine, in part, whether there was not an approach to assessment that could contribute to the attaining of these aims while, at the same time, contributing to a better quality of learning. My particular concern was whether assessment could be shaped in such a way as to enhance deep learning (a concept which will be developed in the following chapter).

2.4 THE REQUIREMENTS OF ASSESSMENT

The next question relates to the requirements of assessment; in other words, 'What are the principal quality requirements that should be found in all assessment practice?' In a context where many educators are placed under extreme pressures, Lazear (1999:82) suggests:

> We have created a situation in which the need of students to be assessed authentically and thoroughly, and the need of teachers for time to reflect deeply about fair test designs and effective grading practices are being made subordinate to the cost-saving policies of budget makers, to the arbitrary dictates of college admission officers, to bottom-line-orientated employers, and to the efficiency-driven needs of secretaries who enter grades into computers.

Based on various works (including Lambert & Lines, 2000:7-20; South African Qualifications Authority, 2005c:6; Wakeford, 2003:59 and Wakeford in Haines, 2004:31) the four main requirements of assessment are validity, reliability, fairness and practicability.

2.4.1 Validity

Validity in assessment has been variously defined; however, in essence, validity addresses the extent to which an assessment item *measures what it is supposed to measure* (Haines, 2004:32; Lambert & Lines, 2000:7; Siebörger & Macintosh, 2004:11 and Solomon, 2002:67). In other words, validity considers whether an assessment item assesses what it claims to assess. Applying this, Walvoord and Anderson (1998:22) have argued that for validity the educator should "… choose [assessment items] that are likely to elicit from … students the kind of learning [they] want to measure." In developing this, Luckett and Sutherland (2000:106) point out that validity "… links to both the question of 'fitness *of* purpose' (Are we assessing the right things?) and the question of 'fitness *for* purpose' (Are we assessing the things right?)."

Within the broad demand of validity, five dimensions have been proposed (Brown et al, 1995:82; Wakeford, 2003:44 and Nightingale, Te Wiata, Toohey, Hughes & Magin, 1996:273-274) namely, construct, content, face, impact and criterion-related validity. Construct validity refers to how well the assessment relates to the broader constructs of that which is being assessed, while content validity relates to how well the assessment relates to the specific area or item being assessed. Face validity considers whether the assessment is appropriate for the learners and level in question, and relates to impact validity which considers whether the assessment has the desired impact on the learners. The final aspect is that of criterion-related validity which relates to the extent to which the assessment is a reasonable indicator of future performance.

2.4.2 Reliability

Reliability refers to the consistency of the results of assessment and the extent to which the assessment has similar results in different circumstances (Nightingale et al, 1996:271; Siebörger & Macintosh, 2004:12 and Wojtczak 2002:¶12). The question of reliability relates to whether the same assessment applied in a different context or contexts will produce the same or similar results. The difference in context can include different settings, situations, learners, occasions and

assessors (Haines, 2004:32; Lambert & Lines, 2000:11 and Luckett & Sutherland, 2000:107).

Associated with the demands of reliability is the anticipation of a consistency of outcomes and results. As Ramsden (2003:185) indicates, "... the more predictable, more narrow, and the more conventional the learning outcome that is measured is, the more likely it is that assessment will produce consistent results." Considering the manner in which reliability can be seen to *narrow* the characteristics of the assessment, a key question that arises is that of the relationship between validity and reliability.

To illustrate, Siebörger and Macintosh (2004:12) indicate that writing an essay is a valid way to assess whether a learner can write a long piece of writing. However, considering the nature of the assessment of writing, reliability is seldom high. The issue to be considered is whether validity or reliability is more important. Most writers (including Lambert & Lines, 2000:11-12 and Siebörger & Macintosh, 2004:13) agree that no assessment can ever be completely valid and completely reliable. Furthermore it is generally agreed that validity is more important than reliability, since "... if a test [or assessment item] does not tell us anything useful and usable about the individual [learner] ... what is the point of [the assessment]?" (Lambert & Lines, 2000:11-12).

2.4.3 Fairness

Fairness refers to the need to be consistent and to avoid bias, and applies to both the *technical* and *subjective* dimensions of assessment. Technically, the demand of fairness requires that the actual form of assessment is fair; whereas, subjectively, it requires that all learners are treated fairly. Regarding the technical dimension of fairness, reference is being made to the manner in which assessment items are constructed and carried out. As such, it includes a consideration of whether the value of the assessment item is proportionate to the material in course context; whether the item and its form is appropriate to the way in which the material was taught; whether the criteria and expectations for the

assessment item were clearly communicated; and whether the marking is as objective as possible (Haines, 2004:32-33 and Siebörger & Macintosh, 2004:13).

In relation to the subjective dimension of fairness, the focus rests particularly on the learners' experience of assessment, and includes the following (Haines, 2004:32-33&38; Lambert & Lines, 2000:18&173 and Siebörger & Macintosh, 2004:13): assisting learners to understand the requirements; a conducive learning environment; no favouring of any group (for example, males over females); addressing bias in the choice of design and type; considering potential cultural, economic or social bias; addressing issues of language; and dealing with marker bias against or in favour of certain learners. To summarize, the essence of fairness is that, as far as practically possible, any form of bias or discrimination is minimized or removed from assessment.

With respect to the demand for fairness, it may be argued that it is not automatically met in the traditional *reading and writing* focus of most assessment (for example, Sternberg, 2006a, 2006b & 2007). At a fundamental level, it may be asked, for example, whether it is fair to grant both quick and slow writers the same time period for a written examination. In my own experience, the issue of a learner's physical ability to write has come to the fore; as an increasing number of learners make exclusive use of computers for recording, an increasing number are simply unable to effectively carry out the physical act of writing, never mind writing efficiently and quickly. In addition, there are the broader challenges to fairness that relate to worldview, gender and culture, as examples. It needs to be asked whether, in the light of all these differences, it is fair to utilize a common approach to assessment for all learners.

2.4.4 Practicability

The final requirement of assessment is that of practicability, which refers to the need for assessment to be practical and realistic. Practicability generally arises in contexts that include over-assessment, shortage of resources, excessive volume and unreasonable requirements (Geyser, 2004:97-98). From the educator's perspective, problems often arise with respect to management demands; these

include the time required for administering assessment and the practical implementation of the assessment. As Lambert and Lines (2000:18) comment, "Manageability simply means that the assessment task must not take excessive administrative time so that the costs, in the widest sense, do not outweigh the benefits." In seeking to address these issues, Geyser (2004:97-98) has proposed a number of remedies: appropriate facilities and resources, adequate staff complement, staggered deadlines for submission, coordinated assessment timetable, adequate administrative systems, and appropriately streamlined assessment.

While I acknowledge the challenges that practicability introduces to assessment, especially in contexts of large student numbers, it must be understood that the primary consideration in education is the learner, and that anything that negatively impacts on the learning experience, especially assessment, must be addressed. Perhaps the most significant of the negative influences is the tendency to utilize a more uniform written approach to assessment which is easier to manage, but less valuable to the learner. While I acknowledge that a move away from a uniform approach to assessment may be necessary, I do realize that it will be more demanding on educators and systems. However, I would add that certain higher education fields have shown that at least some change is possible; for example in the training of medical practitioners, where the initial levels of study still tend to be more traditional, but the later levels tend towards varied assessment, including role plays and practical requirements (Wojtczak, 2002).

2.5 TYPES AND METHODS OF ASSESSMENT

In the context of the requirements of assessment, I would argue for a more flexible and varied approach to assessment. To consider whether that is a possibility, it is necessary for me to consider various types of assessment. When it comes to considering types of assessment I became aware that there are numerous suggestions in the literature on assessment, with each having a particular emphasis. As a result, I have chosen to explore the types of assessment in terms of a selected characteristic or emphasis, grouped as follows: by the purpose, nature, reference, assessor, authenticity, formality and alternatives. One

important observation is that these groupings and types are neither absolute nor categorical. In other words, it is important to realise that assessment items may be described in terms of more than one general grouping or specific type. In the context of my research, the importance of this section is that it demonstrates a remarkable variety in the types and methods of assessment, acknowledged by practitioners and scholars, but not sufficiently utilized in practice.

2.5.1 'By the purpose'

Considering the types of assessment in terms of purpose, the question is *why* the assessment is being carried out. In this grouping the three main types of assessment are formative, summative and terminal. **Formative assessment** is that assessment which endeavours to assist learners in the developmental formation of their mastery and understanding of the required material (Haines, 2004:35; Sadler in Lambert & Lines, 2000:113 and Siebörger & Macintosh, 2004:22). It is assessment which is "…used to give students feedback on their progress towards achieving the intended student learning outcomes in a subject or unit. … [encouraging] student learning by the provision of feedback on performance." (Nightingale et al, 1996:269). As such, the learner is helped in that the assessment provides information that assists the educator to appreciate what the learners understand; provides insights that help the learner to appreciate what they understand; and enhances the interaction between teacher and learner which contributes to more effective teaching and learning (Lambert & Lines, 2000:113 and Luckett & Sutherland, 2000:101). The educator is better equipped to shape teaching to meet the needs of the learners, and the learner is better able to grasp where they stand in relation to the expected and required learning outcomes of the given course.

While formative assessment seeks to help *form* the learner and their learning, **summative assessment** seeks to *sum up* what the learner has learnt (Nightingale et al, 1996:273 and Siebörger & Macintosh, 2004:22). The purpose of such assessment may be summarized as the making of a judgement on the achievements of learners in order to establish their level of achievement, grade them, assist in selection processes, predict future performance, and to licence

learners for certain occupations (Luckett & Sutherland, 2000:101). When summative assessment is carried out at the end of a course or unit of study, it may be referred to as **terminal assessment** (Siebörger & Macintosh, 2004:23); often being used to determine the final grade or mark of the learner (Haines, 2004:35).

2.5.2 'By the nature'

The next possible grouping of types of assessment is that which refers to the nature of the process, and includes both integrated and continuous assessment. Rather than being *strict* types of assessment, these may be described as approaches to assessment, yet most writers include them as types. Basically, **integrated assessment** is defined as "… a form of assessment which permits the learner to *demonstrate* applied competence and which uses a range of formative and summative assessment methods." (SA National Standard Body in South African Qualifications Authority, 2005b:7). In practice the learner is afforded an opportunity to demonstrate their ability or competence, sometimes across outcomes, by means of one or more methods of assessment (Nightingale et al, 1996:269 and South African Qualifications Authority, 2005b:7).

Continuous assessment "… is when course work throughout the term is assessed and counts towards the final summative assessment" (Haines, 2004:35), regardless of the value attributed to any form of terminal or summative assessment at the end of the unit of study. Within this assessment, the learner is required to make regular submissions throughout their period of study, all or most of which contribute to the determining of the final grade or mark allocated to the learner (Nightingale et al, 1996:268 and Siebörger & Macintosh, 2004:23). Such assessment can be used in a static or dynamic manner. If used statically, it simply refers to the allocation of assessment tasks through the course, all contributing to the final grade or mark. When used dynamically, continuous assessment means that a previous assessment task is used to inform further teaching and subsequent assessment items. In this context, "… continuous assessment suggests a cyclical process through which a multifaceted, holistic understanding of the learning [and related learning] can be developed." (Geyser, 2004:101).

2.5.3 'By the reference'

The third grouping of types is those that are described in terms of the manner in which the assessment items are referenced or scored. I include four types in this grouping, the commonality being that they are described in terms of what *standard* is used to allocate the grade or mark. The first, **self-referenced assessment** involves the learner being referenced or scored in relation to their own previous or prior scoring, either by themselves or by the teacher. In other words, this assessment focuses on "… comparing a learner's achievement to what the learner has done at a given time before … which is called self-referencing or ipsative assessment…." (Siebörger & Macintosh, 2004:13).

By contrast, in **norm-referenced assessment** the learner is graded in relation to their peers, whether it be peers in the same course group (micro-context; for example, all the learners in one subject class) or peers across a national, even international, cohort (macro-context; for example, all learners in their final year of schooling in a given country). The question asked in this assessment is how the learner has achieved in the context of the achievement of others within their group (Haines, 2004:39; Lambert & Lines, 2000:15; Nightingale et al, 1996:27 and Siebörger & Macintosh, 2004:13). The most important aspect of this approach from the perspective of the learner is that the score of the individual, over which they do have control, is determined by the performance of other students, over which they do not have control (Biggs, 2003:59). Because of this, distortions between the ability of the learner and the allocated score are very common; for example, in groups were the majority have mastered an outcome well, the learners will still be grouped around an average, regardless of actual achievement.

Responding to this problem in norm-referenced assessment, there is **criterion-referenced assessment** in which "… the results depend on each student learning the appropriate knowledge and skills: the ball is in the student's court." (Biggs, 2003:59). Criterion-referenced assessment therefore shifts the reference for grading and scoring to criteria that are independent of the learners (Siebörger & Macintosh, 2004:13). Consequently, it is necessary for the criteria to be clearly defined and stipulated *before* assessment is carried out (Haines, 2004:36 and

Lambert & Lines, 2000:17). Such definition and stipulation should be made known to all learners, then serving as the criteria in terms of which the learners know they need to perform. Based on criterion-referenced assessment learners may be graded or scored either in terms of a designated mark (a raw score or a percentage) or by relating the assessment item relative to a stipulated standard, sometimes referred to as **ungraded assessment** (for example, *satisfactory* or *unsatisfactory*) (Nightingale et al, 1996:268&273).

Similar to the preceding types of assessment is **performance assessment** in which "... the student completes or demonstrates the same behaviour that the assessor desires to measure..." (Taylor, 2003:39) or which "... requires students to perform tasks that mirror the objectives of the unit." (Biggs, 2003:184). Similarly, **competency based assessment** is that which endeavours to assess a learner's competency or competencies as required by the given unit or course of study (Nightingale et al, 1996:268). Finally, there is also a form of assessment which endeavours to establish why certain learners *cannot do* or carry out expected outcomes. This is generally referred to as **diagnostic assessment**, which is "... used to diagnose a student's strengths and weaknesses, and to determine: ... whether a student is ready to be admitted to a particular learning programme [and] what remedial action may be required to enable a student to progress." (Luckett & Sutherland, 2000:101).

2.5.4 'By the assessor'

Another grouping is that which relates to the person *who is* doing the actual assessment and/or scoring thereof. In this grouping, there are three main assessment types, by far the most common being **teacher assessment** referring to a type of assessment in which it is the teacher (educator) who carries out and scores the assessment items completed by the learners. **Peer assessment** is assessment in which learners are assessed by their fellow learners, rather than by their educators (Haines, 2004:44). Interestingly, "... the overwhelming view is that peer assessment is generally a useful, reliable and valid exercise. However, in some circumstances [the problem is that] student over-marking occurs." (Nightingale, 1996:123). This would generally arise because of the *sympathy* of

fellow learners, which is why it has been suggested that peer assessment is best carried out with reference to stipulated criteria (Nightingale et al, 1996:271).

The third type is **self-assessment** where the aim remains the same, but it is the learner who carries out the assessment (Haines, 2004:44 and Nightingale et al, 1996:272). The nature of such assessment may range from the use of prepared exercises, together with a marking memorandum, through to self-prepared assessment tasks. The value of self-assessment is reflected by Luckett & Sutherland (2000:112), who argue that "… self-assessment has proved to be an excellent means of getting students to take responsibility for their own learning, to consolidate their learning and to become more reflective and effective learners." Further to this, is the observation that "... self-assessment can yield valuable information to assist the teacher in understanding how the [learner] feels toward educational issues." (Taylor, 2003:49).

2.5.5 'By authenticity'

Sternberg (2007:21) argues that "... we should assess what students need to become active and engaged citizens of the world in which they live. ... We should also assess in ways that can help students develop the skills they need for success in school and life." Responding to such comments **authentic assessment** refers to assessment that is carried out in a situation that is as close to *real world* conditions as possible; while simultaneously requiring the learner to apply their knowledge, skills and values (Hughes & Magin, 1996:149; S.P.T. Malan, 2000:26 and Nightingale et al, 1996:267). Geyser (2004:102) explains that "... authentic assessment concerns the assessment of complex performances and higher order skills in real life contexts. [It] ... is contextualised, involves complex intellectual challenges, and does not involve fragmented and static bits and tasks."

2.5.6 'By the formality'

When formality of assessment is considered, there are two types, formal and non-formal/informal assessment. **Formal assessment** is that in which a learner is aware that they are being assessed, and that such assessment will contribute

directly to the final grades or marks that will be allocated to the learner's achievement (Nightingale et al, 1996:269 and Siebörger & Macintosh, 2004:21). By contrast, **non-formal assessment** is characterized by three factors: firstly it is usually non-deliberate (Siebörger & Macintosh, 2004:19); secondly, it does not result in the allocation of grades or marks (Nightingale et al, 1996:269); and thirdly, the learner is not always aware that they are being assessed (Siebörger & Macintosh, 2004:20).

2.5.7 'By the alternatives'

The final type of assessment is that of alternative or adaptive types of assessment. **Alternative assessment** is described by Taylor (2003:45) as "... a substitute way of gathering meaningful information on students' learning for those who are unable to take, even with accommodations, the regular assessment." Further to this, "The purpose ... is ... to minimise the impact of a range of intrinsic and extrinsic barriers upon the performance of the learner. [This is] ... to accommodate the functional difference between some learners." (South African Department of Education, 2002:9). The main and critical question that I have, regarding alternative assessment, is why such assessment should be regarded as alternative for exceptions and not available to everyone? In other words, why is such assessment referred to as an exceptional arrangement?

2.5.8 Methods of assessment

A consideration of the types of assessment highlights the variety that is possible for assessment, which is paralleled by variety in the methods of assessment. The reason for the inclusion of this brief section is to indicate the incredible variety of assessment methods that are available to the educator, yet most of which are not the experience of many learners in higher education. This list was drawn from a variety of sources (Bellanca & Fogarty in Lazear, 1999:148; Biggs, 2003:170-212; Haines, 2004:42-44; Hughes & Magin, 1996:149; Lambert & Lines, 2000:131; Lazear, 1999:142&158-160; Luckett & Sutherland, 2000:115-120; Nightingale et al, 1996:269-270; Taylor, 2003:45&118; Wakeford, 2003:46-50 and Walvoord & Anderson, 1998:193-195). Commenting on the value of such a list, Ramsden

(2003:186) says that "... at the very least teachers should be aware of the existence of an assortment of methods in all subject areas."

Table 2.1 Assessment Methods – Various Proposals

Oral methods Audio recordings, debates, dialogues, discussions, group discussions, interviews, listenings, narratives, oral reports, oral examinations, presentations, quizzes, questionings, role plays, simulations.
Written methods Abstracts, autobiographies, annotated bibliographies, bibliographies, briefing papers, budgets, bullet point lists, case analyses and studies, checklists, contemplative essays, critical incident accounts, definitions, diaries, essays, examinations, field notes, final examinations, inventories, laboratory notes, letters, logs, matching questions, mathematical problems, multiple choice questions, newspaper articles, notes, objective tests, opinion, plays, poems, project plans, projects, questionnaires, reflective journals, reports, research papers, scientific reports, scripts, self-report inventories, short answer questions, stories, summaries, technical reports, tests, thinking log, true/false tests, word problems, written reviews.
Graphic methods Advertisements, brochures, cartoons, charts, cognitive maps or webs, diagrams, drawings, flowcharts, graphs, maps, multimedia presentations, overlays, plans, posters, power point presentations, presentations, sketches, slide presentations, tables, video recordings, virtual learning environments.
Products Architecture, artefacts, art work, games, in-tray exercises, laboratory work, manuals, models, music, performances, photographs, portfolios, practical work, sculpture, visual aids, web pages.

This basic consideration of the types and the brief overview of various methods of assessment demonstrates the great potential that exists for variety in assessment.

2.6 ASSESSMENT IN OUTCOMES-BASED EDUCATION

The final consideration in this chapter is that of assessment in Outcomes-Based Education, as it was the educational context within which I carried out my empirical research. This section should be read in conjunction with the related section in the first chapter, and should be understood as part of the orientation to my empirical research, rather than a comprehensive treatment of the topic.

2.6.1 The significance of outcomes

Hager, Gonczi and Athanasou (1998:55) argue that "... crucial to carrying out any assessment process is deciding what is to be assessed." As the designation *Outcomes*-Based Education emphasizes, outcomes are the critical orientating dimension (Stringer, 2008:159). Consequently, OBE *begins and ends* with outcomes: all teaching is directed by the outcomes and all assessment measures learner achievement in terms of the outcomes (Fry, Ketteridge & Marshall, 2003:32 and Geyser, 2004:103-104). For this reason, outcomes are critical to every aspect of teaching and assessment in OBE, with the actual preparing and statement of outcomes being critical. These outcomes are expected to define:

- who is to perform the desired behaviour (eg, the student);
- what actual behaviour would demonstrate the objective (eg, to write);
- the result of the behaviour (eg, the product);
- the conditions under which the behaviour would be performed (eg, in a two-hour exam);
- the standard used to evaluate the success of the product (eg, 70 per cent correct).

(D'Andrea, 2003:32)

Based on the outcomes the educator is expected to determine the necessary assessment requirements (Nightingale et al, 1996:270 and Ramsden, 2003:182).

Therefore, it must be stated that the significance of outcomes is primary, and underlies the entire teaching and assessment process.

2.6.2 The nature of assessment

In outcomes-based assessment, "... learners are assessed in terms of whether or not they are able to demonstrate an outcome." (Maskew Miller Longman, 2001:15). Considering the significance of outcomes, the learner is assessed in terms of whether or not they have satisfactorily mastered the given outcomes; such mastery implying that the learner is able to meet the demands and expectations of the stated outcomes (S.P.T. Malan, 2000:26). This expectation is developed as follows:

> The key word in outcomes-based assessment ... is demonstration. In other words, it is up to learners/candidates to demonstrate their knowledge, ability, competence or proficiency, and it is up to assessors to judge the quality of such demonstration. On the basis of their judgements, assessors will then decide whether candidates' performances during the demonstration were sufficient for them to be awarded the necessary credits or qualifications. (B. Malan, 1997:30).

Therefore, the key *relationship* in Outcomes-Based Education assessment is that between the learner and the outcomes being assessed. As such, it is the assumption of OBE that the given assessment is examining a direct relationship between the learner and the stated outcome; in other words, that there is *nothing* between the two. Graphically, this may be illustrated as follows:

←→ ***Outcome***

Illustration 2.1 Assumed OBE Learner-Outcome Relationship

This means that the planning of assessment begins with the outcomes to be assessed, then choosing the appropriate type and form of assessment. A further

consideration may be that of assessment options for learners who experience educational difficulties and barriers to learning (South African Department of Education, 2002:5). What this opens up is the strong possibility for varied types and methods of assessment, because the emphasis is not on the method or methods of assessment, rather it is on determining the degree or extent to which the learner has mastered the required outcome or outcomes (South African Department of Education, 2002:8).

What this brief section (together with the section in the first chapter) highlights is the probable inadequacy of the traditional approaches to assessment for OBE. There has to be a move towards assessment that reduces the *distance* between the learner and outcome, simultaneously lessening the impact of the type and method of assessment on the learner. The challenges of assessment in OBE are the same as those faced by the assessment of learning in general.

2.7 SYNTHESIS

In this chapter I have examined the assessment of learning in terms of definition, requirements, types and methods, and Outcomes-Based Education. The aims of the assessment of learning were listed as being to measure achievement, to motivate learning, to monitor progress, and to support learning. Alongside these aims were the requirements of validity, reliability, fairness and practicability. Further to these, I demonstrated variety in assessment in terms of potential types and methods. However, it is also apparent that the use of variety tends to be limited in the experience of many learners in higher education. Having established a foundation in relation to the assessment of learning, it is now possible for me to examine deep learning, what it is and its relationship to assessment. I will conclude that chapter by proposing principles by which the assessment of learning can be utilized to promote deep learning.

CHAPTER 3:
DEEP LEARNING AND ASSESSMENT

3.1 INTRODUCTION

In chapter one I outlined the main impetus for, and influencing factors on, my research; while in chapter two I have examined the assessment of learning. In this chapter, I will examine the next important concept and focus of my research, *deep learning*, as an approach to learning, paying particular attention to how the assessment of learning can promote deep learning. With respect to my research problem, it is the intention of this chapter, based on an understanding of deep learning, to present an understanding of the significance of assessment for the promotion of deep learning. That understanding will then inform the consideration of the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning in the following chapter.

An understanding of deep and surface approaches to learning was initially researched by Ference Marton, Roger Säljö and their colleagues in Gothenburg University (Entwistle, 1991:¶7; Marton & Säljö, 1984:36-55 and Rhem, 1995:1), and was understood to relate to the relationship between a learner and their learning within a particular context (Bowden & Marton, 1998:61 and Ramsden 2003:41). While Marton (Marton & Säljö, 1984:43-44) referred to deep and surface *processes*, Entwistle "... preferred to use the term *approach* but retaining Marton's categories of deep and surface." In his later works, Marton adopts Entwistle's preference for *approaches* (for example, Bowden & Marton, 1998). In this chapter, I will examine the concept of a deep approach to learning, including a consideration of surface and strategy learning, and then propose certain principles for the assessment of learning that will promote a deep approach to learning. Consequently, I will argue that meaningful assessment and the promotion of deep learning can and should interrelate. To achieve this, this chapter will consider two main issues; firstly, the concept of deep learning and, secondly, principles for deep learning assessment. In so doing, I endeavour to present a concise understanding of deep learning, its characteristics and nature. Then, based on that

understanding, I will propose and discuss seven principles for deep learning assessment.

3.2 UNDERSTANDING DEEP LEARNING

3.2.1 Deep learning

Deep learning is one of three main approaches to learning, the other two being surface and strategy learning, and is concerned with the quality of the relationship between the learner and the object of learning (Bowden & Marton, 1998:61). As Biggs (2003:17) explains, "… approaches to learning describe the way students relate to a teaching/learning environment; they are not fixed characteristics of students, [rather] their 'academic personalities' so to speak." It is proposed that learners make a choice with respect to an approach influenced by an internal (personal) motivation and external (learning environment) impetus (Atherton, 2005:¶5; Bowden & Marton, 1998:61and Ramsden 2003:45). In developing an understanding of the approaches to learning, most writers compare and contrast deep learning with surface learning, also making reference to strategy (or achieving) learning. The most common conclusion is that "… deep is good, surface is bad, and we should teach in a way that encourages students to adopt a deep approach; although achieving this is not so easy" (Engineering Subject Centre, 2005: ¶5). However, Marton & Säljö (1984:46) respond by saying that "... we are not arguing that the deep ... approach is always best: only that it is the best, indeed the only, way *to understand* learning materials."

Understanding the essence of deep learning begins with the adjective *deep*, which is used in contrast to that described as *surface* (learning). Deep learning is that learning which occurs when it is essentially motivated from within the learner and results in learning that has *deep* consequences and significance. Ramsden (2003:48-49) argues, "... the process is internal: the students are concerned with integrating the new material with their personal experiences, knowledge and interests." Rhem (1995:2) suggests that a deep learning approach is one that "... embraces a sense of the student's *intention* in taking up a learning task as well as *how* he goes about the task (processing it)."

However, as shall be considered under surface and strategy learning, environmental factors do play an important and influential role (Ramsden, 2003:47). Accepting that a choice for (or against) deep learning is influenced by both internal and external factors is important for an appreciation of deep learning. Firstly, considering that the choice or motivation comes from within the learner, it is apparent that deep learning is an approach that is internal or intrinsic to the learner (Biggs, 2003:16-17; Marton & Säljö, 1984:44 and Prosser & Trigwell, 1999:3). In other words, while external factors do influence the choice for deep learning, the greater impetus comes from within the learner. Among the factors motivating deep learning, Entwistle (1991:¶9) has identified interest in a subject aside from academic requirements and personal self-confidence; while a key motivation is the belief that the studies are an opportunity to learn about reality and to develop one's way of thinking about reality (Marton & Säljö, 1984:45).

Nightingale (et al, 1996:267) comment that deep learning "… describe[s] a situation in which a student is motivated intrinsically to satisfy curiosity about a topic"; while Prosser and Trigwell (1999:3) observe that "… [the learner has] an intrinsic interest in the task and an expectation of enjoyment in carrying it out." Because of this intrinsic and internal motivation, learners are generally prepared to invest the necessary *energy* in completing the academic experience, the required learning and study, both physically and psychologically (Astin in Walvoord & Anderson, 1998:43). Further to this, the learner is often willing to work *beyond* the basic or essential requirements of the particular learning experience, whether in the broad context of studying for a qualification or within the demands of a specific requirement, to the extent that deep learning will often encourage "… [reading] widely, discuss[ing] issues and [reflecting] on what has been heard and read, integrating details into broad, over-arching (or high-level) ideas which she or he is constantly trying to develop" (Nightingale et al, 1996:267).

The main consequence is that the learner will not simply endeavour to master the basics to pass the course or requirement; rather, the learner will endeavour to extract maximum return from the learning experience. As a result, the learner will, amongst other things, integrate new learning into existing knowledge; critically interact with existing and new knowledge; work at higher cognitive levels;

restructure existing knowledge where appropriate; and vigorously interact with the material (Chalmers & Fuller, 1996:7; Fry et al, 2003:18 and Lambert & Lines 2000:152). One of the practical consequences of this approach is that learners are no longer primarily concerned with grades or marks; rather, they endeavour to achieve personal development and growth. It has been argued that "… what actually correlates with success are not grades, but 'engagement' – genuine involvement in courses and campus activities. Engagement leads to 'deep learning', or learning for understanding" (Merrow, 2003:¶12)

Considering the nature of deep learning, learners may be encouraged toward deep learning in a variety of ways, including: teaching and assessment tasks that encourage a deep approach, rather than a breadth of coverage; meaningfully building on the previous experiences and prior knowledge of the learners; an emphasis on principles and structure, rather than examples and facts; a clear statement of academic expectations, including clear objectives and outcomes, which elicit a response from the learners and encourage deep learning; affording the learner the opportunity to choose aspects of the content and method of learning; and interest on the part of the learner in that which is being studied; the encouragement of a positive learning environment and the rewarding of more than the recall of facts or information; and adequate and meaningful qualitative feedback on assessment items (Biggs, 2003:16-17; Ramsden, 2003:80 and Tim, 2004:¶3-5). Specific attention will be given to the role of assessment in the promotion of deep learning later in this chapter.

3.2.2 Surface learning

In contrast to deep learning is surface learning, "... the essential distinction between them is that a surface approach focuses on what can be called the *sign* [the object of study] while a deep approach focuses on what is signified [the significance of what is studied] (Bowden & Marton, 1998:49). Biggs (2003:14) argues that "... the surface approach arises from an intention to get the task out of the way with minimum trouble while appearing to meet the course requirements." As such, surface learning tends to arise when learners regard the learning and related demands as external or extrinsic to themselves (Lambert & Lines,

2000:152; Nightingale et al, 1996:267 and Prosser & Trigwell, 1999:3). For example, Entwistle (1991:¶9) argues that a surface approach to learning is often motivated by anxiety, fear of failure and vocational motives. It is disturbing to note that "... studies in Australia suggest that students progressively drop a deep approach to learning as they move through high school and college" (Rhem, 1995:1). To clarify this relationship between the learner and the learning, I would propose that in deep learning the learning is subjective or internal to the learner, while in the surface approach the learning is objective or external to the learner.

In terms of this approach, learning is seen as a task to be completed with the least effort and maximum return. Chalmers and Fuller (1996:6-7) explain that the surface approach to learning is based on a principle or intention that is external or extrinsic to the real purpose of the task. This means that surface learning is typified by the accumulation and reproduction of unrelated facts, the meeting of requirements by mechanical or rote learning, and an instrumental and pragmatic approach to learning (Fry et al, 2003:18; Prosser & Trigwell 1999:3 and Ramsden, 2003:59). In other words, learning is seen as a task to be completed and seldom more.

The following factors often contribute to learners' tending towards surface learning: previous experiences of assessment; an excessive amount of content or material in the course; courses are constructed in such a way as to encourage mechanical and rote learning; the intrinsic value of courses is not clarified; learners have previously been successful using surface approaches; assessment tasks encourage and/or reward a surface approach; poor presentation of requirements, together with inadequate feedback on completed requirements; teaching that is disjointed and/or encourages cynicism; a lack of opportunity to pursue subject matter in depth; when learners experience any form of academic *overload* often resulting in anxiety, particularly overassessment and too high a workload (Biggs, 2003:15-16; Rhem, 1995:4; Tim, 2004:¶3 and Trigwell & Prosser, 1996:¶9).

Deep and surface learning may be contrasted as follows (Biggs, 2003; Bowden & Marton, 1998; Marton & Säljö, 1984 and Ramsden, 2003).

Table 3.1 Deep and Surface Approaches to Learning

Deep Learning	Surface Learning
* Intention to understand	* Intention to complete task
* Meaning orientation	* Reproducing orientation
* Internal and intrinsic motivation	* Learning regarded as externally demanded and imposed
* Quantity and quality	* Quantity without quality
* Reflective attitude	* Reproductive attitude
* Active dialogue	* Limited personal involvement
* Holistic focus on what is significant	* Fragmented focus on components and isolation of parts
* Interpretive concern for evidence, argument and relationships	* Concern for details and parts
* Organize and structure into a coherent whole for complex understanding	* View material as disjoined and separate
* Integration	* Disjunction
* Seek personal meaning	* Expedience
* Relate to existing knowledge	* Memorize information
* Relate to everyday experience	* Separation from real world experiences
* Focus on the real world	* Surface focus

3.2.3 Strategy learning

Strategy learning, also referred to as achieving learning, is that learning which is adopted by learners with a strategic motivation, and may be deep or surface. Fry (et al, 2003:19) suggest that in this approach, the learner "… [organizes] learning specifically to obtain a high examination grade … a learner who often uses a deep

approach may adopt some of the techniques of a surface approach to meet the requirements of a specific activity…." I would agree with them in what they have said, but would argue that the aim of the learner could be related to the attaining of any mark; for example, some learners may use strategy or achieving learning with no other intention than to *pass* a course, in contrast to those who seek to achieve a higher grade or mark for another purpose or reason. As Rhem (1995:2) explains, "... the same student may take a deep approach in a humanities class, where it seems to be demanded, and a surface approach in a science class where just grabbing the facts and formulae seems to equal academic success." This approach may be described as pragmatic or functional with the intention being to achieve an intended result, regardless of whether the learner tends toward deep or surface learning (Atherton, 2005:¶3; Chalmers & Fuller, 1996:7 and Lambert & Lines, 2000:152).

As such, I would argue that this approach is not a distinguishable *third* approach; rather it is an approach that uses the range from deep to surface learning as convenient and required. However, some scholars have suggested that this approach may best be regarded as a form of surface learning, in that the intention remains external to the real purpose of learning (Atherton, 2005:¶3 and Chalmers & Fuller, 1996:7). This approach also serves to demonstrate that learners may choose and move between approaches, both between courses and within a course.

Learners tend towards strategy or achieving learning when factors such as the following play a role: courses and teaching emphasize the attainment of higher grades or marks; external factors such as bursary requirements, occupational opportunities and parental expectations demanding high achievement; a personal desire to achieve, based on a variety of reasons; situational pressures such as overassessment, time pressures and a desire to achieve; where individuals have a very pragmatic or functional view of the learning process, often as a means to an end.

Based on the previous discussion, the relationship between the three approaches to learning can be illustrated as follows:

← *Strategy (or achieving) learning* →	
← Surface learning ←	→ Deep learning →

In this illustration I have endeavoured to show that surface and deep learning should be understood as functioning on a continuum, rather than as two absolute and separate approaches. In addition, the strategy or achieving approach *floats* across and between the two, as the approach works towards its own goals, which vary between learners.

Of significance to my research, this section has shown that not all learners will choose deep learning, and that there are important factors that play a role in the choice of the learner for deep, surface or strategy learning. Included in those factors are issues that relate to the assessment of learning, which is the concern of my research. Moving on from this introduction to the approaches to learning, for the purposes of positioning my research, I now consider how deep learning may be promoted through meaningful assessment of learning.

3.3 ASSESSMENT AND DEEP LEARNING

As it is the purpose of my research to examine the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning, it is necessary to consider the relationship between assessment and deep learning, followed by the development of principles for deep learning assessment.

3.3.1 Assessment and learning

Most scholars are in agreement that the assessment of learning is one of the most important influencing factors with respect to learning, deep or otherwise (including, Boud, 1995:37; Bowden & Marton, 1998:61-26; Entwistle, 1991:¶6 and Haines, 2004:3). It has been variously argued that learning is influenced by a number of

varied factors; however, many have argued that the single most important factor is that of the assessment of learning (see Chalmers & Fuller, 1996:41). In support of this understanding, Biggs (2003:36) has pointed out that learners who move from deep learning to surface learning are most commonly influenced by the assessment of learning and how they experience it (Bowden and Marton, 1998:8). Consequently, the learners' experience of assessment and the perceived demands of assessment will impact on their choice as to their approach to learning (Bowden & Marton, 1998:9).

In this light, it is apparent that there is a significant, probably even dominant, influence of assessment over learning, and not vice versa (Madaus, 1998:40). While it is probable that most educators would prefer to see the process as one that moves from learning to assessment, for most learners it is rather from assessment to learning. Biggs (2003:140-141) illustrates the two perspectives as follows:

Educator: objectives → teaching activities → *assessment*
Student: *assessment* → learning activities → outcomes

What this means is that the learner will first consider and reflect on the assessment requirements and then, based on that, make a decision regarding learning (Chalmers & Fuller, 1996:42). As such, the educator needs to understand that assessment practices and requirements will communicate to the learner and generally shape the learner's approach to learning. Boud (1995:37) argues that assessment requirements give "... a message to students about what they should be learning and how they should go about it. The message is coded, is not easily understood and often it is read differently and with different emphases by staff and students."

Based on an appreciation of the learner's experience of assessment, it becomes apparent that the educator must exercise cautious and meaningful *control* over assessment, especially in terms of how assessment requirements are constructed. Of particular importance is the danger of utilizing inappropriate or unsuitable assessment methods and types, resulting in assessment that will do little to direct

and encourage learners towards deep learning (Ramsden, 2003:68-72). In considering surface and strategy learning, Ramsden (2003:68) strongly suggests that "… it is our assessment, not the student, that is the cause of the problem." By contrast, a considered and meaningful approach to assessment will have a positive impact on the learners' approach to learning (Chalmers & Fuller, 1996:38-39). In practice, this means that the educator must clearly understand and communicate what achievement is intended in and through their teaching, and then to ensure that their assessment practices match their intentions (Engineering Subject Centre, 2005:¶11-12 and Luckett & Sutherland, 2000:10).

One area where caution is needed is the assumption that the use of certain methods and types of assessment *automatically* produces certain kinds of learning. It is more likely that it is *how* any method or type of assessment is used, rather than specific methods or types, that is more determinative (Engineering Subject Centre, 2005:¶8). Another area of caution is that certain subjects and content may not be open to a choice of learning approach (Atherton, 2005:¶10). For example, there are times when learners simply need to master certain foundational content; something that is often applicable at the beginning or commencement levels of learning, where rote learning may be necessary in certain areas. A final note of caution is that the learner's perception of and response to an assessment task is also influenced by the nature of the quality of related teaching (Nightingale, 1996:125). In summary, regardless of the cautions, it is generally agreed that assessment is the main determinative of the learners' approach to learning.

3.3.2 Assessment for deep learning

It is important to affirm the hope that improved assessment practice would contribute to improved learning, and thereby promote deep learning (Black & William in Lambert & Lines, 2000:14). Where assessment encourages deep learning, it will promote deep learning (Chalmers & Fuller, 1996:41). Speaking of the *backwash effect*, Biggs (2003:140) observes that learners "... learn what they think they will be tested [assessed] on. This is *backwash*, when assessment determines what and how students learn more than the curriculum does". Biggs

(2003:140-141) goes on to observe that "... learning for the assessment is inevitable; students would be foolish if they didn't. The trick is to align the assessment to what the students should be learning. Backwash then becomes positive." In other words, it is apparent that *backwash* can be actively utilized to encourage and promote deep learning. It should, however, be noted that it has been argued that certain scholars have reservations as to whether assessment methods of themselves can promote deep learning (Atherton, 2005:¶7).

At the same time, it is necessary to be aware of the possibility that efforts to promote deep learning may simply contribute to more complex endeavours at a surface learning level (Atherton, 2005:¶5). In such circumstances, the learners will try to produce the appearance of deep learning, while still working at a surface or achieving level of learning. The question to ask is how assessment can be constructed to promote deep learning. Important suggestions include the following: good preparatory guidance and teaching; teacher availability and support; setting of high expectations; clearly defined assessment requirements; a choice of tasks within requirements; appropriate resourcing and time available; teaching that emphasizes principles and structures; teaching that endeavours to elicit a response; building on the existing knowledge of learners; emphasizing depth over width; assessment that demands integration; assessment that supports explicit aims and objectives; and meaningful and timeous feedback on completed requirements (Biggs, 2003:16-17; Campbell, 1998:¶6; Engineering Subject Centre, 2005:¶8; Haines, 2004:10; Logan, 1971:9 and Walvoord & Anderson, 1998:116). While it is arguable that these suggestions could unwittingly encourage surface learning, the interdependent principles proposed later in this chapter endeavour to reduce that likelihood.

3.4 PRINCIPLES FOR DEEP LEARNING ASSESSMENT

Based on the preceding discussion in this and the previous chapters, this section presents what I propose are the consequent principles for the assessment of learning that will enhance the likelihood of learners' using a deep learning approach to assessment. I have premised these principles on an understanding of the assessment of learning and how assessment interacts with learner

approaches to learning, be it deep, surface or strategy learning. These principles are based on the preceding discussions, together with input from a number of sources dealing directly with these issues (including Angelo & Cross, 1993:4-11; Entwistle, 1991; Gronlund in Taylor, 2003:2-3; Qualifications and Curriculum Authority, 2006; Race, 1995:67-68; Rhem, 1995; Sternberg, 2007; Trigwell & Prosser, 1996; Trigwell, Prosser & Waterhouse, 1999 and Walvoord & Anderson, 1998:2-3&189-191). It is important to understand that, by their very nature, these principles are interdependent; in other words, while these principles may individually promote a deep approach to learning, they are most effective when functioning together.

3.4.1 Principle 1

Assessment is integral to course design and should be centred on the learner's envisaged achievement.

While assessment is often considered as an attachment to a course, it needs to be appreciated and understood that assessment is integral to course design. As Entwistle (1991:¶14) argues, "... it is clear that the approach to learning is affected by the curriculum as a whole." The reason for this is that if assessment is to contribute in a deliberate and purposive manner to the development and education of the learner (associated with principle 7), then it must be of paramount consideration in the design of any and every course. Practically speaking, this means that the educator who designs a course should be able to explain *why* the assessment has been designed as it has, and what role it plays in achieving the overall objectives and outcomes of the given course (see principle 3). By intentionally linking the assessment to the course objectives and outcomes, the assessment is then intentionally linked to the learner's envisaged achievement. Such an approach to assessment will promote deep learning in that it will have been purposely shaped to assist and encourage the learners to *dig deeper and grow*, however, ensuring that the direction of that learning is in accordance with the envisaged achievement of the learner (see principle 5).

3.4.2 Principle 2

Assessment requirements focus on the significant principles and structures of the course material.

This principle is probably best presented in terms of its opposite; namely that assessment requirements that focus on insignificant or peripheral aspects will not (see principles 3&5), by their very nature, be conducive to deep learning and will tend towards surface learning. Positively, assessment items that focus on principles and structures are more likely to promote deep learning (Engineering Subject Centre, 2005:¶8 and Entwistle, 1991:¶8). By focusing on significant principles and structures, learners will be able to focus on the important aspects of what is being studied and be able to integrate that into their broader spectrum of knowledge and learning, all of which can assist in the promotion of deep learning.

3.4.3 Principle 3

Assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.

Assessment needs to be linked to clear and stated objectives and outcomes, if it is to promote deep learning (Campbell, 1998:¶6); in other words, it must be clear to the learner what the course objectives and outcomes are, and how the assessment items relate to them. This would require, especially in OBE, that the aims and purpose of the course are clearly understood and presented to the learner (see principles 5&6); consequently, all assessment is based on the objectives and outcomes of the course. In practical terms, every course designer should be able to show clearly how the assessment items relate directly to the purpose or outcomes of the given course. This would possibly promote deep learning, as such assessment would demand that the learner come to terms with that which is essential and fundamental to the course.

3.4.4 Principle 4

Assessment for deep learning makes use of a wide variety of methods and types.

Perhaps one of the greatest challenges to assessment for deep learning is the ongoing tendency to assess mainly in terms of *reading and writing, reproduction and examination*. In many educational contexts, assignments and exams (or whatever other terms are used) remain the favoured forms of assessment. While acknowledging that they can be utilized to promote deep learning, as I have shown in the preceding chapter, the options and possibilities for assessment go way beyond a few options. To illustrate, the ability to *write* does not automatically equate to the ability to *do*; why then should one not use other and varied forms of assessment if the outcomes or objectives of the course require *doing*? Deep learning could be promoted by the use of a wide range of methods and types of assessment, where what is expected of the learners is clearly stated (see principle 5). Where learners are free to choose their preferred assessment item, it is more likely that they will be encouraged to work at a deeper level, so promoting deep learning (Campbell 1998:¶6-8).

3.4.5 Principle 5

Assessment requirements and criteria are clearly and explicitly stated.

For many learners, a significant problem with assessment lies in a lack of clarity in terms of the assessment requirements, specifically the specific criteria (associated with principle 6). Very often, learners are presented with assessment items, without an indication of what is actually expected of them; in other words, without clear criteria, both academic and technical. Furthermore, where educators know what they expect, these expectations are often not meaningfully communicated to learners, if at all. Practically, this principle means that the educator must ensure that the learners are given the best possible academic and technical guidance in relation to all assessment items (see principle 7). In relation to deep learning, this principle will probably contribute in so far as learners – who know what is expected of them – will be more likely to work in the intended *direction* and with the intended

emphasis (associated with principle 3). Where the assessment items have been well constructed and developed, this will again promote deep learning, as the learners will *dig into* the intended area and focus (associated with principle 4).

3.4.6 Principle 6

Assessment for deep learning is supported by good preparatory guidance, material and personal support, and appropriate resourcing.

This principle is probably no more than a statement of key aspects of good teaching practice. However, where learners do not receive the necessary guidance, they will seldom be able to complete what is expected of them and will of necessity struggle to learn in a meaningful manner (associated with principles 3&5). In other words, this principle calls for the learner to be given all the guidance and support required for the meaningful completion of assessment items, obviously with due consideration as to the given level of study (including the concern of principle 7). By giving the learners what this principle calls for, they are provided with the backing that they need to respond appropriately and meaningfully to any assessment items. This will, then, release the learner to focus on the *heart* of the assessment, which is learning and that is then more likely to be deep learning.

3.4.7 Principle 7

Assessment gives early and comprehensive feedback, with the intention of addressing weaknesses and improving learning.

The final principle relates to the responsibility of the educator once the learners have submitted their assessment items (Tim, 2004:¶5). The first is constructive and focused feedback to the learner, considering that such feedback will form a valuable part of learning. Secondly, feedback needs to be given early and comprehensively; the longer the delay in giving feedback, the less the impact of such feedback (associated with principle 5). Finally, the intention of the feedback must be to help the learner address their areas of weakness, weaknesses

becoming growth points, to further develop what has been completed and submitted in a positive way. In other words, the assessment feedback should highlight areas of weakness that need attention, as well as highlight areas for further development and growth; answering the learner's question, 'Where did I go wrong and how can I improve?' Good quality constructive and focused feedback, given early and comprehensively, addressing weaknesses and improving learning will probably contribute to deep learning. It is my experience that most learners want to do well and are willing to do what is necessary to improve; however, poor feedback does not help them and they often find themselves in a no-man's land where they want to improve but do not know how to. A learner who is assisted in a meaningful way will often move in the direction of deeper learning.

3.5 SYNTHESIS

In this chapter, I have presented three main approaches to learning; being deep, surface and strategy learning; arguing that the most desired approach is that of deep learning. Considering the impact of the assessment of learning on a learner's approach to learning, I have demonstrated that assessment is arguably the most significant determinative for the student's approach to learning, regardless of the intentions of the educator. Based on these considerations, I concluded by proposing seven principles for deep learning in the context of the assessment of learning:

1. Assessment is integral to course design and should be centred on the learner's envisaged achievement.
2. Assessment requirements focus on the significant principles and structures of the course material.
3. Assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.
4. Assessment makes use of a wide variety of methods and types.
5. Assessment requirements and criteria are clearly and explicitly stated.

6. Assessment is supported by good preparatory guidance, material and personal support, and appropriate resourcing.
7. Assessment gives early and comprehensive feedback, with the intention of addressing weaknesses and improving learning.

Having established a case for the desirability of deep learning, and having proposed the principles as listed, in the following chapter I will be examining the theories of multiple intelligences. The purpose of that examination will be to explore the possibilities that the theories offer in endeavouring to develop a framework for the assessment of learning that promotes deep learning, which is associated with and linked to the principles presented in this chapter. Based on that consideration, I will propose a theoretical framework, in the form of principles for the assessment of learning that takes into consideration theories of multiple intelligences, and will then present an example of how that framework might be applied in practice.

In terms of my research problem, this chapter has demonstrated that the assessment of learning does have an impact on the approach to learning that learners will choose and that this impact can be intentionally influenced by the educator in the terms expressed in the seven principles listed above. The following chapters will then consider the manner in which theories of multiple intelligences may contribute to the application of these principles and so contribute to the promotion of deep learning.

CHAPTER 4:
THEORIES OF MULTIPLE INTELLIGENCES AND DEEP LEARNING ASSESSMENT

4.1 INTRODUCTION

In the preceding chapter I considered the significance of the assessment of learning for deep learning and then proposed seven principles for deep learning in the context of the assessment of learning. I have, furthermore, already indicated that the theories of multiple intelligences may have a contribution to make to the development of assessment items that contribute to the promotion of deep learning. Robert Sternberg (2002:¶1) has observed that during the period 1992 to 2002 "… a number of exciting developments have occurred in the domain of theory with respect to our understanding of intelligence." Highlighting his own work and that of Howard Gardner, he went on to say that "… new theories … have expanded our thinking about intelligence and … helped us to realize that intelligence is a much broader construct that many of us have thought" (Sternberg, 2002:¶1). My personal earlier exposure to the work of Gardner and subsequent examination of the work of Sternberg suggested to me that in theories of multiple intelligences may lie a valuable reference or source for the development of a more meaningful approach to the assessment of learning and the promotion of deep learning.

With this in mind, I will examine these theories in this chapter, focusing on the work of Gardner for its general educational influence and that of Sternberg for its apparently greater academic credibility in some education circles. In addition, I pay brief attention to the arguments for emotional and spiritual intelligences; not so much for their possible value, but because it is necessary to examine them in the light of their increasing popularity and association with theories of multiple intelligences. My examination of these theories, together with my previous consideration of the assessment of learning and deep learning, then forms the theoretical framework of my research. That framework is then drawn together in the presentation of principles for Multiple Intelligences Based Assessment, which will then be combined with the previously presented principles for deep learning

assessment in four principles of Multiple Intelligences Based Assessment for Deep Learning. Finally, these principles are operationalized in a practical construct that may be utilized in the application of the framework.

4.2 THEORIES OF MULTIPLE INTELLIGENCES

Historically, while there has been an awareness of what would generally fall under the term *intelligence*, there has not always been a process or system for the measurement of intelligence. Instead, intelligence was usually considered to be a general and unspecified term commonly used to describe a person's particular or unusual ability, without specifically defining the extent or range of what may be regarded as intelligent.

In Paris, around 1900, Alfred Binet and his colleagues carried out work that gave rise to the IQ (intelligence quotient) test, as it is now well known and commonly referred to, and which was understood to be testing a unitary trait referred to as intelligence (Willingham, 2006:¶7). Their initial motivation was to develop a means by which the potential or probable performance of children in elementary school could be predicted. The test was based on a large set of items that were assessed, scored and analyzed to anticipate or predict probable school performance. Over time, this work developed into the IQ tests and standardized testing of the contemporary era (Gardner, 1993:163-166). What particularly characterized and characterizes this approach is that intelligence is reduced to a single overarching construct (Denig, 2004:¶4), an approach and perspective that has generally been accepted and unchallenged for the larger part of the twentieth century. As Willingham (2006:¶5, *italics added*) explains, prior to a consideration of the possibility of multiple intelligences, "... definitions were limited to cognition or thought; one was intelligent to the extent that one could solve problems and adapt effectively to one's environment using *thinking* skills." Such was the acceptance of such an understanding of intelligence through most of the twentieth century, that Sternberg (1985:4) was prompted to observe that "... among scientific disciplines the field of intelligence has not been notable for rapid progress, either in theory or in practical application."

Within this broader context, questions began to be asked about the orthodox understanding of intelligence. Rather than viewing intelligence as a *uni*-dimensional phenomenon, certain scholars have come to regard intelligence as a *multi*-dimensional phenomenon. For example, Kuhn (Lazear, 1999:3) argues that "… intelligence is a multidimensional phenomenon that is present at multiple levels of our brain/mind/body system." Working within this broader context, Gardner (1983) and Sternberg (1985) began to investigate the possible broader extent and nature of human intelligence. At the time of writing his ground breaking book, *Frames of Mind* (1983), Gardner (2003:4) observes: "I was claiming that all human beings possess not just a single intelligence (often called 'g' for general intelligence). Rather, as a species we human beings are better described as have a set of relatively autonomous intelligences." Similarly, Sternberg (1988:11) argued for and supported the understanding of multiplicity, but without the autonomy of Gardner. As such, "MI theory represents a pluralistic view of intelligences…" (Goodnough, 2001:220); while also having impacted on educational theory and practice in a remarkable way (Kornhaber, 2004:67).

4.2.1 Howard Gardner

4.2.1.1 Background

In his introduction to the tenth anniversary edition of *Frames of Mind*, Gardner (1983:xxiii) comments on his approach to, and motivation for, the conceptualization of multiple intelligences: "I wanted to broaden conceptions of intelligence to include not only the results of paper-and-pencil tests but also knowledge of the human brain and sensitivity to the diversity of human cultures." Building on this he proposes that "… there is an alternative vision [to education] that I would like to present – one based on a radically different view of the mind…. It is a pluralistic view of mind, recognizing many different and discrete facets of cognition, acknowledging that people have different cognitive strengths and contrasting cognitive styles" (Gardner, 1993:6). Consequently, he sought to develop an approach to human intelligence that is more varied, including a focus on the aspects of problem solving and product making (Smith, 2002:¶6-7).

While there are those who are critical of the work of Gardner (addressed later in the chapter), there are many who regard him very highly. Armstrong (1994:¶4) comments, “At times, I almost think of Gardner as an archaeologist who has discovered the Rosetta stone of learning. One can use … [Gardner’s] model to teach virtually anything, from the ‘schwa’ sound to the rain forest and back.” While Levin (1994:570) argues that “… Gardner’s work on multiple intelligences (MI) is cogent and provocative, but never dogmatic. It is thoughtful and heuristic in the best sense.” Continuing, he suggests that Gardner “… is one of the most cosmopolitan thinkers in education, drawing on different conceptual and research traditions and always being open to new interpretations of phenomena.”

4.2.1.2 Seven intelligences

4.2.1.2.1 Overview

In his early works, Gardner does not define intelligence, limiting himself to general comments on intelligence, such as the following:

> To my mind, a human intellectual competence must entail a set of skills of problem solving – enabling the individual *to resolve genuine problems or difficulties* that he or she encounters and, when appropriate, to create an effective product – and must also entail the potential for *finding or creating problems* – thereby laying the groundwork for the acquisition of new knowledge. (Gardner 1983:60-61).

More than a decade later, Gardner (1999:33-34) appeared to have clarified his understanding, defining intelligence “... as a *biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture*.”

However, while he has used the term *intelligences*, Gardner appears to hold to the term somewhat loosely. In response to a question on the importance of the term, he once answered as follows:

> There is nothing magical about the word ‘intelligence.’ I have purposely chosen it to join issue with those psychologists who consider logical reasoning or linguistic

> competence to be on a different plane than musical problem-solving or bodily-kinesthetic aptitude. Placing logic and language on a pedestal reflects the values of our Western culture and the great premium placed on the familiar tests of intelligence. A more Olympian view sees all seven as equally valid. To call some 'talent' and some 'intelligence' displays this bias. Call them all 'talents' if you wish; or call them all 'intelligences'" (Gardner, 1993:35-36)

Therefore, it is apparent that Gardner is not as concerned about what term is used, as he is concerned that *intelligences* be given equal significance or value. However, Willingham (2006:14) does not accept the legitimacy of Gardner's response, arguing that he "... has ignored ... the connotation of the term *intelligence*, and that has led to confusion among his readers."

Gardner's theory of multiple intelligences initially proposed seven intelligences, later considering the addition of a further three intelligences. These intelligences were adopted on the basis that they met the requirements of eight criteria or signs (Gardner, 1983:62-67), namely:

1. Potential isolation by brain damage;
2. The existence of idiots savants, prodigies, and other exceptional individuals;
3. An identifiable core operation or set of operations;
4. A distinctive developmental history, along with a definable set of expert 'end state' performances;
5. An evolutionary history and evolutionary plausibility;
6. Support from experimental psychological tasks;
7. Support of psychometric findings;
8. Susceptibility to encoding in a symbol system.

Gardner (1999:35-41) then grouped these criteria or signs by associating them with certain fields of study; namely, the biological sciences (1&5), developmental psychology (2&4), and logical analysis and traditional psychology (6&7). However, Gardner has been criticized for:

> ... demanding that only a majority [of the criteria] be satisfied, and some are rather easy to satisfy. The psychometric criterion is the most rigorous method of the eight, but Gardner has largely ignored it.... The remaining criteria are so weak that they cannot restrain a researcher with a zest for discovering new intelligences (Willingham, 2006:8).

Gardner's first presentation of seven intelligences was in his book *Frames of Mind* (1983:73-277):

1. Linguistic [verbal] intelligence;
2. Musical intelligence;
3. Logical-Mathematical intelligence;
4. Spatial intelligence;
5. Bodily-Kinesthetic intelligence;
6. The personal intelligences, being:
    a. Intrapersonal intelligence,
    b. Interpersonal intelligence.

Considering the manner in which Gardner defines multiple intelligences, Shearer (2004:3-4) highlights three features: intelligence is about solving problems, it is not limited to rapid and logical problem-solving, and it is not simply something limited to your *head*. Gardner regards the seven intelligences as distinct, although he argues that they very rarely operate independent of each other (Brualdi, 1996:¶15). It is also important to note that Gardner (1993:9) regarded the initial seven intelligences as a preliminary list, and was open to the addition of other intelligences, provided that they met the eight criteria or signs to be met for an intelligence.

4.2.1.2.2 Definitions

In defining and explaining the seven intelligences, I will commence with Gardner's own definition of each of the intelligences. In his earliest work, *Frames of Mind* (1983), Gardner tended to limit himself to the description and illustration of the seven intelligences, without presenting specific definitions. Ten years later, in

Multiple Intelligences: The Theory in Practice (1993), he begins to define them; while only in 1999, in *Intelligence Reframed* (1999:41-44), does he present what may be referred to as intentional definitions. The reason is unclear; however, it may be suggested that he was endeavouring to respond to his critics and their challenge to the scientific veracity of his theorizing.

"***Linguistic intelligence*** involves sensitivity to spoken and written language, the ability to learn languages and the capacity to use language to accomplish certain goals. Lawyers, speakers, writers, poets are among the people with linguistic intelligence" (Gardner, 1999:41, bold added). As such, reference is being made to that exceptional ability of certain people to work with and use words to a greater effect than most others (Armstrong, 1994:¶3&12). Therefore, such people learn best through the use of language and words, and are inclined to prefer the use of words and language in the achievement of goals and tasks (Brualdi, 1996:¶5 and Smith, 2002:¶11). Consequently, in the educational setting, these are the learners who do well in tasks that demand the use and manipulation of language (Lazear, 1999:70); for example, in debates and written assignments.

"***Musical intelligence*** entails skill in the performance, composition, and appreciation of musical patterns. … musical intelligence is almost parallel structurally to linguistic intelligence, and it makes no sense to call one (usually linguistic) an intelligence and the other (usually musical) a talent" (Gardner, 1999:42, bold added) This intelligence relates to those people who love music and rhythm (Armstrong, 1994:¶3&12), and are very sensitive to environmental sounds (Lazear 1999:74). They love all forms of music and find it easy to remember music (Denig, 2004:¶7). As learners, people with this intelligence enjoy creating, performing and appreciating music (Willingham, 2006:¶15).

"***Logical-mathematical intelligence*** involves the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. Mathematicians, logicians, and scientists exploit logical-mathematical intelligence" (Gardner 1999:42, bold added). This intelligence refers to excellence in activities that demand a logical and/or mathematical ability; often observed in people who function optimally in a logical and systematic manner (Brualdi, 1996:¶4 and

Lazear, 1999:71). As learners, these people tend to excel in mathematics and the sciences (Smith, 2002:¶12), where the application of structured processes is required (Armstrong, 1994:¶3&12 and Denig, 2004:¶7).

"***Spatial intelligence*** features the potential to recognize and manipulate the patterns of wide space (as seen, for instance, in navigators and pilots) as well as the patterns of more confined spaces (such as those of importance to sculptors, surgeons, chess players, graphic artists, or architects)" (Gardner 1999:42, bold added). Not only does this intelligence involve working with the conceptualizing of a reality in a spatial concept, for example maps and puzzles (Denig, 2004:¶7); it also involves the use of colours and thinking in pictures (Nelson in Denig, 2004:¶7). Referring to blind children, Gardner argues that spatial intelligence is often well formed and is a means by which they learn to *survive* in an unseen concrete environment (Brualdi, 1996:¶6). In summary, this intelligence is "… the ability to present the spatial world internally in your mind" (Anonymous, 2006), often manipulating that world to solve problems (Brualdi, 1996:¶6).

"***Bodily-kinesthetic intelligence*** entails the potential of using one's whole body or parts of the body (like the hand or the mouth) to solve problems or fashion products. Obviously, dancers, actors, and athletes foreground bodily-kinesthetic intelligence" (Gardner, 1999:42, bold added).This intelligence affirms that those people who function best in bodily context are indeed intelligent (Armstrong, 1994:¶3&12 and Denig, 2004:¶7). For people with bodily-kinesthetic intelligence, the use of the body and all related sensations becomes critical to both doing and learning (Denig, 2004:¶7 and Smith, 2002:¶14). In addition, "… this intelligence challenges the popular belief that mental and physical activities are unrelated" (Brualdi, 1996:¶8). In the traditional educational system, one of the challenges faced by learners with a strong bodily-kinesthetic intelligence is that of the common demand in many classrooms and lecture theatres to sit still for an extended period, while often being bored because they are not actively involved in the learning process (Lazear, 1999:73).

"***Intrapersonal intelligence*** involves the capacity to understand oneself – including one's own desires, fears and capacities – and to use such information

effectively in regulating one's own life" (Gardner, 1999:43, bold added). In his earlier definition, Gardner (1993:9) suggested that "… intrapersonal intelligence … is a correlative ability, turned inward. It is a capacity to form an accurate, veridical model of oneself and to be able to use that model to operate effectively in life." Both definitions highlight this as an intelligence of the *self* (Armstrong, 1994:¶3&12), sometimes resulting in a focus on personal benefit and gain (Denig, 2004:¶7 and Willingham, 2006:¶18). Learners with such intelligence tend to prefer working on their own (Denig, 2004:¶7), using their self-understanding to complete and master tasks more effectively (Smith, 2002:¶17).

"***Interpersonal intelligence*** denotes a person's capacity to understand the intentions, motivations, desires of other people and, consequently, to work effectively with others. Salespeople, teachers, clinicians, religious leaders, political leaders, and actors all need acute interpersonal intelligence" (Gardner, 1999:43). In other words, this is the intelligence of looking to others, rather than to oneself (Denig, 2004:¶7, Smith, 2002:¶16 and Willingham, 2006:¶17). In terms of learning, such people enjoy functioning in the context of people and relationships (Armstrong, 1994:¶3&12 and Denig, 2004:¶7).

4.2.1.3 Three further intelligences

Having established the initial seven intelligences, Gardner subsequently considered the possibility of three further intelligences, and explored the possibility of others. While the following quotes may be extensive, it is best to let Gardner reflect his own thinking. In *Intelligence Reframed* (1999:47), he explains:

> In the first edition of *Frames of Mind* [1983], I listed seven intelligences largely because these intelligences best met my eight criteria, but I readily conceded that the decision to enumerate seven entailed neither logical or scientific necessity. … Here I consider three 'new' candidate intelligences: a *naturalistic intelligence*, a *spiritual intelligence*, and an *existential intelligence*. The strength of evidence for these varies, and whether or not to declare certain human capacity another type of intelligence is certainly a judgment call.

Later, in a paper reflecting on the first twenty years of his work, he explained that "… in 1994-5 I … [reviewed] evidence for … [the] new intelligences. I concluded that there was ample evidence for a naturalist intelligence, and suggestive evidence as well for a possible existential intelligence ('the intelligence of big questions')" (Gardner, 2003:7). Gardner has settled on the addition of naturalistic intelligence with openness to existential intelligence, but seriously doubting a spiritual or moral intelligence (Gardner, 2003:10). However, he has indicated that further intelligences may well be *discovered* (Gardner, 2003:10-11).

Of **naturalistic intelligence**, Gardner (1999:52) says "… eschewing formal ceremony, I have … acknowledged an eighth intelligence by a simple performative speech act. My review process can later be used to consider and, if appropriate, incorporate additional capacities within the family of human intelligence." In this, he appears to be suggesting that he considers it to be a strong candidate; however, for some reason, he had not yet subjected it to the criteria or signs that he had previously applied to the seven that he had accepted. Lazear (1999:77) explains this intelligence as follows:

> These students have a profound love for the outdoors, animals, plants, and almost any natural object. They are fascinated and noticeably affected by such things as the weather, changing leaves in fall, sound of the wind, warm sun or lack thereof, or an insect in the room. At a young age they were likely nature collectors, adding such things as bugs, rocks, leaves, seashells, sticks, and so on to their collection. These students probably frequently bring home stray animals, have several pets and want more, and have an affinity and respect for all living creatures.

In other words, the emphasis of this intelligence is linked to the ability of the individual to interact with and show insights into nature (Anonymous, 2006; Denig, 2004:¶7; Willingham, 2006:¶19 and Wilson, 1997:¶7).

In *Multiple Intelligences: The Theory in Practice*, Gardner (1993:46, bold added) argues:

> **Moral or spiritual intelligence** serves as a reasonable candidate for an eighth intelligence, although there is equally good reason to consider it an amalgam of

> personal intelligence and intrapersonal intelligence with a value component added. What is moral or spiritual depends greatly on cultural values; in describing intelligences we are dealing with abilities that can be mobilized by the values of culture rather than the behaviors that are themselves valued in one way or another.

However, in *Intelligence Reframed: Multiple Intelligences for the 21st Century*, published six years later, he was clearly shifting his understanding, writing:

> It seems more responsible to carve out that area of spirituality closest 'in spirit' to the other intelligences and then, in the sympathetic manner applied to naturalistic intelligence, ascertain how this candidate intelligence fares. In doing so, I think it best to put aside the term *spiritual*, with its manifest and problematic connotations, and to speak instead of an intelligence that explores the nature of existence in its multifarious guises. Thus, an explicit concern with spiritual or religious matters would be one variety – often the most important variety – of an existential intelligence. (Gardner, 1999:60)

As such, it may be summarized that while Gardner had felt that there could be a spiritual intelligence, he is no longer convinced. His main concern appears to be the extent and nature of what is regarded as spiritual. As Smith (2002:¶30) has pointed out, "According to Gardner … there are problems … around the 'content' of spiritual intelligence, its privileged but unsubstantiated claims with regard to truth value, and the need for it to be partially identified through its effect on other people."

The last of the three further intelligences is:

> **Existential intelligence**, or concern with 'ultimate' issues, seems the most unambiguously cognitive strand of the spiritual. That is because it does not include features that, according to my definition, are not germane to a consideration of intelligence. If this form qualifies, then we may legitimately speak of existential intelligence; if it does not, further consideration of the realm of spirituality is unnecessary. (Gardner, 1999:60, bold added).

While Gardner is open to the possibility of an existential intelligence, his hesitation is based on the lack of empirical evidence, despite an argument that it is a

reasonable match to Gardner's criteria for definition as an intelligence (Smith, 2002:¶31).

Reflecting on these three proposed intelligences, Gardner (2003:10) comments that, "So far, I am sticking to my 8½ intelligences [+1 being naturalistic and ½ being existential] but I can readily foresee a time when the list could grow, or when the boundaries among the intelligences might be reconfigured."

4.2.1.4 Discussion of Gardner's understanding of intelligence

In reflecting on the work of Gardner, it must be conceded that he has had a major impact at least on the popular understanding of intelligence, with a particular impact on its application in education. This, without really winning over the scientific establishment, which has raised serious concerns about Gardner's approach (Chen, 2004:17; Denig, 2004:¶11 and Smith, 2002:¶34-38). In the words of one of his critics, "Howard Gardner became a hero among educators simply by redefining talents as 'intelligences'" (Willingham, 2006:¶1). From a scientific perspective, the main challenges lie in a questioning of the criteria used, the argued lack of empirical data, and the proposed lack of meaningful validation. Based on this, the question is whether Gardner is not simply speaking of talents rather than intelligences, or whether he is not simply describing human abilities as intelligences. Perhaps the most important critique is whether Gardner's proposal is not simply a popular psychology that has touched a nerve in education circles.

How then has Gardner managed to have the impact that he has? A probable response is that "… MI theory makes sense to practitioners and fits their experience about individuals' intellectual strengths and weaknesses" (Chen, 2004:21). In other words, regardless of the grounds or quality, Gardner has succeeded in developing an understanding of intelligence that *makes sense* to many educators *in the classroom* (Wilson, 2004:¶5). It has been said that Gardner verbalized so much of what educators have felt, and that makes them feel good (Kornhaber & Krechevsky in Kornhaber, 2004:69). Based on this ready acceptance by many educational practitioners of Gardner's theory of multiple intelligences, the challenge lies in the application of the theory into the educational

context, especially the classroom of the learner. As such, it has been suggested that the teacher must be familiar with the intelligences of each individual learner. Based on that understanding, the teacher is challenged and expected to individualize their teaching to each learner (Krechevsky & Seidel, 1998:24). This, in itself, is probably the greatest challenge to the effective application of Gardner's theory in the classroom. Too many teachers already regard themselves as overwhelmed, and the challenge to teach in such an individualized manner is perceived to be excessive and unmanageable.

I will next be examining the work of Sternberg; however, it is interesting to allow him to speak to the work of Gardner. Sternberg (1988:58) has suggested:

> The field [of human intelligence] has been notoriously contentious, with every theorist setting out to prove that his theory is right and everyone else's is wrong. For example … Howard Gardner maintains that there are at least seven or eight intelligences. For me, the most disturbing element of these … opposing theorists has been that while they have done reasonably well in amassing evidence to support their own point of view, they have generally failed to disprove the views of others.

With specific reference to Gardner, he proposes that "… Gardner is correct in noting that there are multiple aspects of intelligent mental self-management. The notion that these different aspects are *independent*, however, is simply wrong" (Sternberg 1988:73, *italics added*).

4.2.2 Robert Sternberg

4.2.2.1 Background

While the work of Gardner has been popularly accepted and recognized, Robert Sternberg is generally unfamiliar to people who have been influenced by Gardner. The main reason for this, arguably, lies in that the work of Sternberg is significantly more academic and technical, demanding a lot more from the educator in relation to understanding and application. As with Gardner, I will be quoting Sternberg in his own words. At a foundational level, Sternberg (1988:57-58) argues that "… to

understand intelligence completely, it seems that one needs to understand the relationship of intelligence to three things: the internal world of the individual, the external world of the individual, and the experience with the world that mediates between the internal and the external worlds."

Having been inspired to reconsider intelligence by people he had contact with (Sternberg 1988:57), Sternberg (1988:22-36) begins by listing four fallacies regarding the traditional understanding of intelligence: *quick* is *smart*, the *high verbal* reads with great care and comprehension, vocabulary is a measure of intelligence, and intelligent people are simply better than less intelligent people in problem solving. Together with these fallacies, Sternberg (in Epstein, 1999:¶4) proposes that "… the problem is that many professionals have bought into the notion that intelligence is one single thing – an IQ, a g-factor. Our research pretty strongly shows that to be false." Having highlighted this, he moves on to argue that intelligence is made up of all that is necessary for the adaption of the human being: "In the triarchic theory, intelligence in everyday life is defined as the *purposive adaptation to, selection of, and shaping of real-world environments relevant to one's life and abilities*" (Sternberg, 1988:65). In *The Triarchic Mind*, Sternberg (1988:11) says:

> The position taken in this book is that intelligence can be defined as a kind of *mental self-management* – the mental management of one's life in a constructive, purposeful way. … Mental self-management … can be said to have three basic elements: adapting to environments [environmental adaptation], selecting new environments [environmental selection], and shaping environments [environmental shaping].

Based on these three elements, Sternberg goes on to propose three abilities that make up intelligence (Sternberg in Epstein, 1999:¶17), each based on the three basic elements referred to in the preceding quote:

> Environmental adaption – analytical abilities (componential subtheory)
> Environmental selection – creative abilities (experiential subtheory)
> Environmental shaping – practical abilities (contextual subtheory)

Discussing these, he explains, "… our research has shown that all three kinds of abilities – academic, creative and practical – can be improved. Abilities are modifiable, flexible. When we give a test, the result isn't indelible; rather, it says where you are now" (Sternberg in Epstein, 1999:¶17). It is important to note that Sternberg uses the terms *analytical abilities* and *academic abilities* interchangeably, while referring to the same components or elements. In view of this, it may be argued that Sternberg's understanding is not really one of *multiple* intelligences in the sense in which Gardner regards his eight intelligences as separate and distinguishable.

In his more recent work, Sternberg (see, for example, 2004a, 2006a & 2006b), and together with Elena Grigorenko (see, for example, 2003) and others (for example, Sternberg, Grigorenko and Zhang, 2008), has begun to develop *the theory of successful intelligence*, which "... suggests that students' failure to achieve at a level that matches their potential often results from teaching and assessment that are narrow in conceptualization and rigid in implementation" (Sternberg & Grigorenko, 2003:208). One of the most significant contributions to the development of his thought has been published in the article, *Styles of Learning and Thinking Matter in Instruction and Assessment*, co-authored with Grigorenko and Zhang (2008). Further attention will be given to these developments in the section which gives consideration to his contribution to the assessment of learning.

4.2.2.2 Triarchic Theory

Sternberg has developed what he refers to as the Triarchic Theory of Human Intelligence (see Sternberg, 1985 & 1988). In terms of this theory, intelligence is composed of three main abilities, namely:

1. *Analytical abilities*, the abilities used to analyze, judge, evaluate, compare or contrast.
2. *Creative abilities*, the abilities used to create, invent, discover, imagine, or suppose.
3. *Practical abilities*, the abilities used to apply, put into practice, implement, or use.

> Some students [are] high in analytical abilities, others in creative abilities, and still others in practical abilities. (Sternberg, 1998:2-3)

In other words, Sternberg speaks of three interrelated abilities, rather than three distinct intelligences, in contrast to the understanding of Gardner.

Analytical abilities, related to the componential subtheory, are those that tend to agree with the traditional understanding of intelligence (Miele, 1995:¶5), and deal "… with the mechanism by which intelligent behaviour is accomplished" (Sternberg, 1985:42). The expression of analytical abilities is generally found in tasks that have a single correct answer or response.

Considering **creative abilities**, Sternberg (1985:41) comments that "… the experiential subtheory of intelligence … deals primarily with the points in a person's experience with a task or situation that are most relevant to understanding the role of intelligence in a person's interaction with the task or situation" (Sternberg, 195:41). This relates to creative abilities and is characterized by the manner in which a person relates to stimuli and situations, connecting the individual's internal world to external reality. The key is the creativity of the person in a variety of situations, whether the creativity is in solving a real-life situation or the creation of something new.

The third dimension is that of **practical abilities**; "… the contextual subtheory of intelligence … emphasizes the role of adaptation to, selection of, and shaping of environments in attaining to fit to the environmental contexts in which one lives" (Sternberg, 1985:41). Simply put, this ability is that in which a person responds to everyday personal and/or practical problems, referring to the ability to adapt to everyday life by drawing on existing knowledge and skills.

It is interesting to note that in his article, *Applying the triarchic theory of human intelligence in the classroom* (Sternberg, 1998:1-15), Sternberg appears to propose another ability, namely, ***memory ability***. However, while he never develops this ability in his main works, the article certainly suggests that he may consider this ability as another component or element of human intelligence.

4.2.2.3 Discussion of Sternberg's understanding of intelligence

Commenting on Sternberg's triarchic theory, it should be noted that while Gardner speaks of eight separate intelligences, Sternberg considers his three proposed abilities as constituting one multidimensional intelligence. However, considering Gardner's willingness for his *intelligences* to be referred to as *talents* it is arguably unnecessary to draw too many inferences from the differences in terminology (Gardner, 1993:35-36). I would suggest that Gardner would be willing to utilize Sternberg's reference to *abilities*, as long as such abilities were given equal value. Application of Sternberg's theory to the educational setting has focused largely on teaching and learning (Sternberg, 1998:3), with very limited consideration of the assessment of learning. For example, Sternberg (1998:3) argues:

> Much of the teaching done in classrooms reaches only students whose strength is in learning by memory. Students with other kinds of strengths – analytical, creative, or practical, for example – may be taught in a way that almost never matches their pattern of abilities. They should be taught in a way that matches all of these patterns of abilities….

A final comment is left to Gardner (1999:101-102) and his evaluation of Sternberg:

> I applaud Sternberg's effort to develop new measures of intelligence, which clearly can help broaden our notions of human capacities. I wish, however, that his new measures were more adventurous. Sternberg adheres too closely to the kind of linguistic and logical items that have traditionally dominated intelligence testing; and I predict his new measures will end up correlating highly with standard tests and with one another. In these emphases, Sternberg reveals that he is much more of a psychologist and a psychometrician than I am. And this may explain why his work has been of greater interest to psychologists, while mine has captured the interest of educators and the general public.

As such, it is apparent that Gardner and Sternberg do not agree beyond a basic argument that the traditional approach to intelligence is too narrow. However, the question that will be further pursued is whether Gardner and Sternberg's theories have a contribution to make to the promotion of deep learning through the assessment of learning.

4.2.3 Emotional and spiritual intelligences

In considering the theories of multiple intelligences, attention, albeit brief, will be given to the increasingly popular theories of emotional and spiritual intelligences.

4.2.3.1 Emotional intelligence

In 1995, Daniel Goleman published his book, *Emotional Intelligence*, which argued that emotional intelligence should fall within the broader consideration of multiple intelligences (2004:42). Arguing that the traditionally understood IQ was an inadequate predictor of success in life, he suggested emotional intelligence as a more significant predictor of success (Cherniss, 2000:4). In this context, Goleman (2004:44) argued that "… IQ and emotional intelligence are not opposing competencies, but rather separate ones. [People] all mix intellect and emotional acuity…." As a leading emotional intelligence researcher, David Caruso, argues, "… it is very important to understand that emotional intelligence is not the opposite of intelligence, it is not the triumph of heart over head – it is the unique intersection of both" (EQ Today, 2002:¶10).

While it enjoys a contemporary emphasis in the popular domain, the roots of emotional intelligence are probably located in the 1930's in the work of Robert Thorndike, who wrote about what he referred to as *social intelligence*. More recently, the concept of emotional intelligence has found impetus in the light of Gardner's work from 1983 onward (Cherniss, 2000:2-3). Caruso (2004:1) suggests that there have been three general approaches to emotional intelligence, reflected in the work of three main persons or groups. Firstly, Reuven Bar-On's consideration of subjective well-being; secondly, Goleman's emphasis of emotional competencies; and, finally, Jack Myer and Peter Salovey who focus on the interrelationship between emotions and thinking, cognition and affect.

While there has been significant popular response to the idea of emotional intelligence, especially responding to Goleman and related works, a measure of hesitation has been expressed by others. For example, Hein (2004:¶8) suggests that "… while I believe there is definitely validity to the concept of emotional

intelligence…. Goleman has unfortunately made wildly exaggerated and premature claims about what it is and what it means." On the affirming side, for example, is the observation by EQ Today (2002:¶4):

> … [we] asked the world's top experts and researchers to explain emotional intelligence. The conclusion: There is an intelligence based on emotion, and people who have this capacity are less depressed, healthier, more employable, and have better relationships.

I would conclude that, while the idea of emotional intelligence may be worth further investigation, the concept is yet to establish itself in its own right, and I would suggest that it is little more than a popular variant of Gardner's personal intelligences.

4.2.3.2 Spiritual intelligence

The second popular intelligence is that referred to as spiritual intelligence. While the concept of this intelligence seems to be gaining ground, it remains very nebulous and seems to refer to little more than an above-average religious or spiritual understanding. The organization Conscious Pursuits (2004:¶3) locates spiritual intelligence within intelligences as follows:

SQ (spiritual intelligence) "Inner wisdom guided by Compassion."
EQ (emotional intelligence) "Managing ourselves and our relationships well."
IQ (general intelligence) "Math & Verbal intelligences."
PQ (practical intelligence) "Body awareness and skillfull [sic] use."

McMullen (2003:60) argues that "… if cognitive intelligence is about thinking and emotional intelligence is about feeling, then spiritual intelligence is about being"; while Zohar (in Wigglesworth, 2002:¶9) proposed that spiritual intelligence is made up of the following components:

1. Self-awareness…
2. Vision & Values Led…
3. The Capacity to Face and USE Adversity…

4. To be Holistic…
5. Diversity…
6. Field Independence (Courage)…
7. The tendency to Ask WHY? …
8. The Ability to Re-Frame…
9. Spontaneity….

Vaughan (2004:¶1) argues the following:

> Spiritual intelligence calls for multiple ways of knowing and for the integration of the inner life of mind and spirit with the outer life of work in the world. It can be cultivated through questing, inquiry, and practice. Spiritual experiences may also contribute to its development, depending on the context and means of integration. Spiritual maturity is expressed through wisdom and compassionate action in the world. Spiritual intelligence is necessary for discernment in making spiritual choices that contribute to psychological well-being and overall healthy spiritual development.

Further to this, Conscious Pursuits (2004:¶5) have said:

> We believe that Spiritual Intelligence skills can be broken into 4 Quadrants:
> 1. Higher Self / Ego self Awareness
> 2. Universal Awareness (awareness of interconnectedness, etc)
> 3. Higher Self / Ego self Mastery
> 4. Spiritual Presence / Social Mastery

I have included the list of quotes above in an endeavour to illustrate that spiritual intelligence is probably no more than a restatement of various and varying religious beliefs and understandings, which significantly lack any form of concrete expression. While what is argued may appear to be valuable, especially to very religious and spiritual people, I would suggest that this proposed intelligence has not yet established academic credibility.

4.2.4 The current debate

Based on what I have examined, focusing on Gardner and Sternberg, it is clear that the examination and study of multiple intelligences is here to stay. The

broadened understanding of intelligence is significant and will require thorough scrutiny into the future. Within this context, it is also inevitable that popular theories, such as spiritual intelligence, will be forthcoming. My ongoing concern is to ask what theories of multiple intelligences, focusing on the works of Gardner and Sternberg, have to offer to a consideration of the assessment of learning for deep learning in higher education. It is to this that I now turn my attention.

4.3 GARDNER AND STERNBERG ON THE ASSESSMENT OF LEARNING

Due to the popularity of Gardner among educators, more has been written about his possible contribution to education than that of Sternberg. However, my observation has been that both Gardner and Sternberg have paid most attention to teaching and learning, with relatively little attention being given to application of their understandings to the assessment of learning (although Sternberg has done more work since the turn of the century). As such, there is a *gap* in the application of their respective theories in educational theory and practice.

For example, in *Frames of Mind*, Gardner (1983:383-392) emphasizes only two key challenges to educational policy makers; namely, the assessing of intellectual profiles and educating in the context of multiple intelligences. There is no reference to the challenges and needs of assessment. This pattern repeats in *Multiple Intelligences: The Theory in Practice* (1993:27-34), where he again pays no attention to the possible contributions of multiple intelligences to assessment. In discussing his concerns, he suggests, "… under the multiple intelligence theory, an intelligence can serve both as the *content* of instruction and the *means* or medium for communicating that content" (Gardner, 1993:32). Once again, there is no meaningful reference to the assessment of learning.

However, Gardner (1993:174-179, italics added to highlight the multiple intelligence related aspects) has made certain broad comments on assessment of learning, proposing, for example, that the following general features should be found:

1. Emphasis on assessment rather than testing;
2. Assessment as simple, natural, and occurring on a reliable schedule;
3. Ecological validity;
4. Instruments that are *intelligence fair*;
5. The use of *multiple measures*;
6. *Sensitivity to individual differences*, developmental levels, and forms of expertise;
7. Use of intrinsically interesting and motivating materials;
8. Application of assessment for the student's benefit.

While his occasional observations are valuable, Gardner has not intentionally developed the application of his theory of multiple intelligences through to an application to the assessment of learning. This has been left to other writers, although few in number; for example, Lazear (1999:105), focusing on schooling, suggesting the following regarding the instruments for the assessment of learning:

- Verbal-linguistic: language arts-based assessment instruments
- Logical mathematical: cognitive patterns-based assessment instruments
- Visual-spatial: imaginal-based assessment instruments
- Bodily-kinesthetic: performance-based assessment instruments
- Musical-rhythmic: auditory-based assessment instruments
- Interpersonal: relational-based assessment instruments
- Intrapersonal: psychological-based assessment instruments
- Naturalistic: environment-based assessment instruments

Based on his commitment to Gardner's eight intelligences, Lazear (1998, 1999 & 2009) has produced very helpful materials for those involved in the schooling system. However, it is probable that his strong emphasis on the individual learner is practically overwhelming for the average classroom teacher. As Sternberg and Grigorenko (2003:212) point out, "Some teachers [understand that there is to be] ... an individualized program for each student. Such a program is usually impractical, especially at the introductory level, and often is counterproductive."

As another example, the organization Performance Learning Systems is endeavouring to apply theories of multiple intelligence to the assessment of learning. In one of their e-newsletters, they ask the question, "Are you looking for

new ways to move beyond traditional written tests and quizzes?" (Performance Learning Systems, 2004:¶2); moving on to answer as follows: "This issue provides practical tips and strategies for how to integrate all eight intelligences (as defined by Howard Gardner) into the assessment process" (Performance Learning Systems, 2004:¶3). To assist educators, they have developed and provide an 'MI Assessment Profile Form' (Performance Learning Systems, 2001) that can be used for the development of assessment items based on the acceptance of Gardner's theory of multiple intelligences.

Lazear and Performance Learning Systems are two examples of the endeavours to apply Gardner's theory to the assessment of learning. However, a survey of the literature and resources shows that they are examples of the few, and that little attention has actually been given to the application of Gardner's understanding of multiple intelligences to the assessment of learning. When it is done, the application focuses strongly on the primary and secondary schooling systems; while I have not been able to access any sources that consider the application of Gardner's understanding to higher education.

Sternberg initially paid little attention to the assessment of learning, like Gardner, paying more attention to the processes of teaching and learning. Initially, he argued that assessment should be varied to match memory, whether analytical, creative or practical (Sternberg, 1998:10-11). Further to this, Sternberg (1998:12-14) also lists obstacles, voiced by teachers, to triarchic teaching and assessment:

1. I can't do it.
2. The administration and other teachers won't support me.
3. Parents are extremely conservative and won't stand for it.
4. My students need to be prepared for conventional tests, and so this kind of instruction is noble but irrelevant to me.
5. The students are used to conventional teaching, so they are silent when I teach for thinking.
6. I don't have time to teach all these three different ways because of the amount of material I need to cover.
7. The evaluation of the assessments is too subjective.

It may be argued that, like Gardner, he had paid limited attention to how his Triarchic Theory might be applied to the application to and practice of the assessment of learning, despite certain exploratory work with Clinkenbeard, Ferrari and Grigorenko in the USA, Russia and certain other countries (Sternberg & Grigorenko, 2003:222). However, more recently, Sternberg (2006a, 2006b & 2007) has begun to pay much more attention to the application of his theory to the assessment of existing academic ability and knowledge, in the context of entrance tests to colleges and universities in the USA (2006b & 2007). In addition, Sternberg, together with Grigorenko (2003), developed an approach to assessment for successful intelligence. This was superseded by Sternberg in his move to the assessment of what he refers to as WICS, being "… an acronym for wisdom, intelligence, and creativity, synthesized…" (Sternberg, 2004a:75-76 & 2007:22). As he evaluates the success or failure of many students, Sternberg argues that the problem may well lie with the education system, rather than with the learners. Sternberg and Grigorenko (2003:208) argue:

> Tthe traditional ways [of teaching and assessment], in essence, typically shine the spotlight on a small number of students with a certain pattern of abilities and almost never shine the spotlight on a large number of students who have the ability to succeed, but whose patterns of abilities do not correspond to the patterns valued by the schools. The solution is to value other ability patterns and then change teaching and assessment so that these other ability patterns can lead to success in school.

In this context, he has been particularly concerned for the 'levelling of the playing field in assessment', arguing firstly that learners should be given multiple and diverse options in assessment; understanding that "... there is no one right way of assessing student's achievement" (Sternberg & Grigorenko, 2003:211-212). The second key element of their argument is that "... teaching and assessment should balance the use of analytical, creative, and practical thinking" (Sternberg & Grigorenko, 2003:215); therefore, educators are to "... teach and assess to weaknesses, as well as strengths" (2003:212).

Practically, this means that attention needs to be given to the following aspects of assessment (Sternberg & Grigorenko, 2003:210-218): appreciate that there is no

right way to assess learner achievement; flexibility in assessment is to be encouraged; learners are to be given diverse and multiple options in assessment; in terms of Triarchic Theory, assessment should balance analytical, creative and practical thinking; and assessment should allow learners both to capitalize on their strengths and compensate for their weaknesses.

Sternberg (2007:23) highlights one of the key challenges to what he is proposing; namely, the growing tendency towards standardized assessment (Schank & Joseph, 1998:63), both within and across educational institutions, often in the name of quality, pointing out:

> In our society [the USA], a problem with teaching and assessing more broadly is that the kinds of standardized assessments we currently use are quite narrow. For example, the SAT Reasoning Test and the SAT Subject Tests assess primarily remembered knowledge and analytical skills applied to this knowledge.

Both Gardner and Sternberg can be seen to be appealing for assessment practices that take seriously the variety that is found in all learners, whether as expressed in Gardner's eight intelligences or Sternberg's three abilities. Therefore, with due consideration of theories of multiple intelligences, particularly as expressed by Gardner and Sternberg, I would suggest that theories of multiple intelligences contribute to a theoretical framework for an understanding of the assessment of learning that will promote deep learning, by contributing to the assessment of learning in general and to the promotion of deep learning through the assessment of learning specifically.

4.4 A THEORETICAL FRAMEWORK

A theoretical framework has been defined by Borgatti (1999:¶1) as "... a collection of interrelated concepts, like a theory but not necessarily so well worked-out. A theoretical framework guides your research...." This understanding is supported by Khan (2010: ¶3) who argues that "... the theoretical framework is but a theory that serves as a basis for conducting research," and Botes (2000a:108) who suggests:

> ... in a *deductive* approach, the point of departure for the research is a conceptual or theoretical framework. This means that the concepts of the research are identified and linked to each other by means of a literature study of existing conceptual frameworks (models and theories).

In the preceding study of the literature, I have examined three main concepts, namely, the assessment of learning, deep learning and theories of multiple intelligences. Together, these form the theoretical framework for the study and the basis for the deriving of the principles that follow in this chapter. In chapter two, I examined the aims and requirements of the assessment of learning, also emphasizing that variety is available for the construction of assessment items. I argued that the use of variety in the assessment of learning can reduce the *distance* between the learner and the outcome being assessed. Chapter three considered a deep approach to learning and its relationship with the assessment of learning, on the basis of which I derived seven principles for deep learning assessment. In this chapter, I have examined theories of multiple intelligences and considered their possible contribution to the promotion of deep learning through the assessment of learning.

Based on the study of literature in chapters two and three, together with the preceding sections in this chapter, I will now present principles that may be derived from theories of multiple intelligences for the assessment of learning. Following that I will synthesize those principles with the principles for deep learning assessment (see 3.4, Principles for deep learning assessment) to present principles for the assessment of learning for the promotion of deep learning in the context of theories of multiple intelligences. The four derived principles will be referred to as Multiple Intelligences Based Assessment for Deep Learning, abbreviated MIBADL (see 4.6.2, Principles for multiple intelligences based assessment for deep learning). Finally, I will operationalize these principles in a practical construct that may be utilized in the construction of assessment items in a unit of study in higher education (see 4.7, A practical construct for the application of MIBADL).

4.5 PRINCIPLES FOR MULTIPLE INTELLIGENCES BASED ASSESSMENT

Based on the study of the literature in this chapter, together with my own reflections on theories of multiple intelligences, I now present what I understand to be consequent principles that may be derived from theories of multiple intelligences and applied to the assessment of learning. I have premised these on my acceptance of theories of multiple intelligences, focusing on Gardner and Sternberg, especially with regard to the implication that not all learners share the same intelligences or abilities as per Sternberg. However, for the sake of simplicity, I will continue to refer to intelligences. It must be understood that these principles are not all-encompassing principles for all assessment (as I endeavoured to present in 3.4, Principles for deep learning assessment), only those that derive from theories of multiple intelligences. For the purposes of presentation, acknowledging that not all scholars agree (Sternberg & Grigorenko, 2003:209-210), I will make use of Gardner's understanding that the intelligences are different (Brualdi, 1996:¶15).

4.5.1 Principle 1

Acknowledge that learners have different intelligence strengths

While not all expressing it in the same way, theories of multiple intelligences all argue that human intelligence is to be seen to be multi-faceted, not unitary. While Gardner refers to eight intelligences and Sternberg to three abilities, as different as they are, they both argue for a multi-faceted understanding of human intelligence. While not paying much attention to it himself, Gardner has argued that the various intelligences are to be considered in assessment, because learners differ with respect to their intelligence strengths (and weaknesses). Sternberg has equally argued the case, especially as he has begun to carry out research into different cultural and national settings (for example, Sternberg, 2006b). Based on an acceptance of the multi-faceted nature of intelligence, as expressed in theories of multiple intelligences, this first principle argues that the educator must commence with an acknowledgement that learners have different intelligence strengths. The significance of this principle for the assessment of learning is that it implies that

different learners may be better able to express the same learning outcome in different ways, therefore, achieving differently, as expressed in principle two.

4.5.2 Principle 2

Acknowledge that learners achieve differently

Premised on principle one, that learners have different intelligence strengths, the logical consequence and implication is that learners will achieve differently. For example, a learner who is stronger in Gardner's linguistic intelligence may find the writing of essays and examinations a good option for assessment, while struggling in assessment that demands musical or spatial intelligence. Conversely, a learner who is strong in musical or spatial intelligence may often find essays and examinations difficult to succeed in. Similarly, a learner who is strong in Sternberg's practical abilities may find assessment demanding strong practical ability much easier than assessment focusing on analytical abilities. Therefore, this principle argues that the educator must acknowledge that learners achieve differently, with the difference being based on the differences that exist between intelligence strengths. With respect to the assessment of learning, this principle requires the educator to allow the opportunity for learners to be variously assessed, where that which is being assessed is suitable for variety in assessment.

4.5.3 Principle 3

Assessment options should acknowledge different intelligences and be characterized by variety

If principles one and two are accepted, then it follows that assessment options should acknowledge the different intelligences. This is more than giving learners options between topics that still expect the same form of presentation; for example, a number of topics to be studied, where the final presentation is limited to a written essay. In the light of the learners' different intelligence strengths and the acknowledgement of those differences in the assessment of learning, it follows

that assessment options should not be limited. Rather, assessment options should be characterized by variety across the assessment experience. In this way principle acknowledgement is given to the desirability of variety, based on different intelligence strengths, across the assessment experience. In practice, it should not be the experience of any learner that all of their assessment is done, for example, by means of essays, tests and examinations. Traditionally and in many cases still, this would be the experience of most students; and where it may not be the only experience, it still tends to be the dominant one. Rather, this principle calls for intelligence-based variety in assessment across the assessment experience of the learner. At this point, it should be acknowledged that there are an increasing number of higher education contexts and settings where this is slowly becoming a reality in disciplines and levels of study where the typical form of assessment has been the written essay, test and examination.

4.5.4 Principle 4

Variety and choice apply in the specific assessment of all objectives and outcomes

Principle four calls for the same variety and choice to be found within the specific assessment of all objectives and outcomes. The basis for this principle is that if learners do vary in terms of intelligence strengths, then that needs to be acknowledged not only across the entire assessment experience, but also within the specific assessment of all objectives and outcomes. For example, in OBE, the context of my research, the intended objectives and outcomes are required to be clearly stated, being the basis for the assessment of learning. Principle three argues that across the entire assessment experience (the macro-context) there needs to be variety; principle four now argues that within each assessment item (the micro-context) there needs to be both variety and choice. For example, in assessment item X, learners should be given choice based on a variety of assessment items. In the context of theories of multiple intelligences and the acknowledgment of different intelligence strengths, that variety of assessment items should be shaped by the varieties of intelligence as variously expressed.

4.5.5 Principle 5

The variety in assessment is to be based on different intelligences

Principle one requires the acknowledgement of different intelligence strengths and principles two calls for the acknowledgement that learners achieve differently. This gives rise to principle three – that assessment should be characterized by variety across the assessment experience. All this logically culminates in principle five which requires that the variety in assessment is to be based on different intelligences. Any other grounds for the differences and variety would not align with the challenges presented by theories of multiple intelligences. If the differences between learners lie in their intelligence strengths (and weaknesses), then the differences (variety) in assessment items must lie in the various intelligences. For example, a learner who is strong in Gardner's bodily-kinesthetic intelligence or Sternberg's creative abilities will not benefit from variety based on different topics all presented as essays. They will only benefit where the variety offered takes their bodily-kinesthetic intelligence or creative abilities seriously; in other words, an assessment item that matches their intelligence strength. Therefore, this principle argues for the alignment of variety in assessment with the various intelligences as defined by Gardner and Sternberg in particular (a practical construct for this will be presented later in this chapter) – this alignment giving rise to what may be referred to as *intelligence based assessment items*.

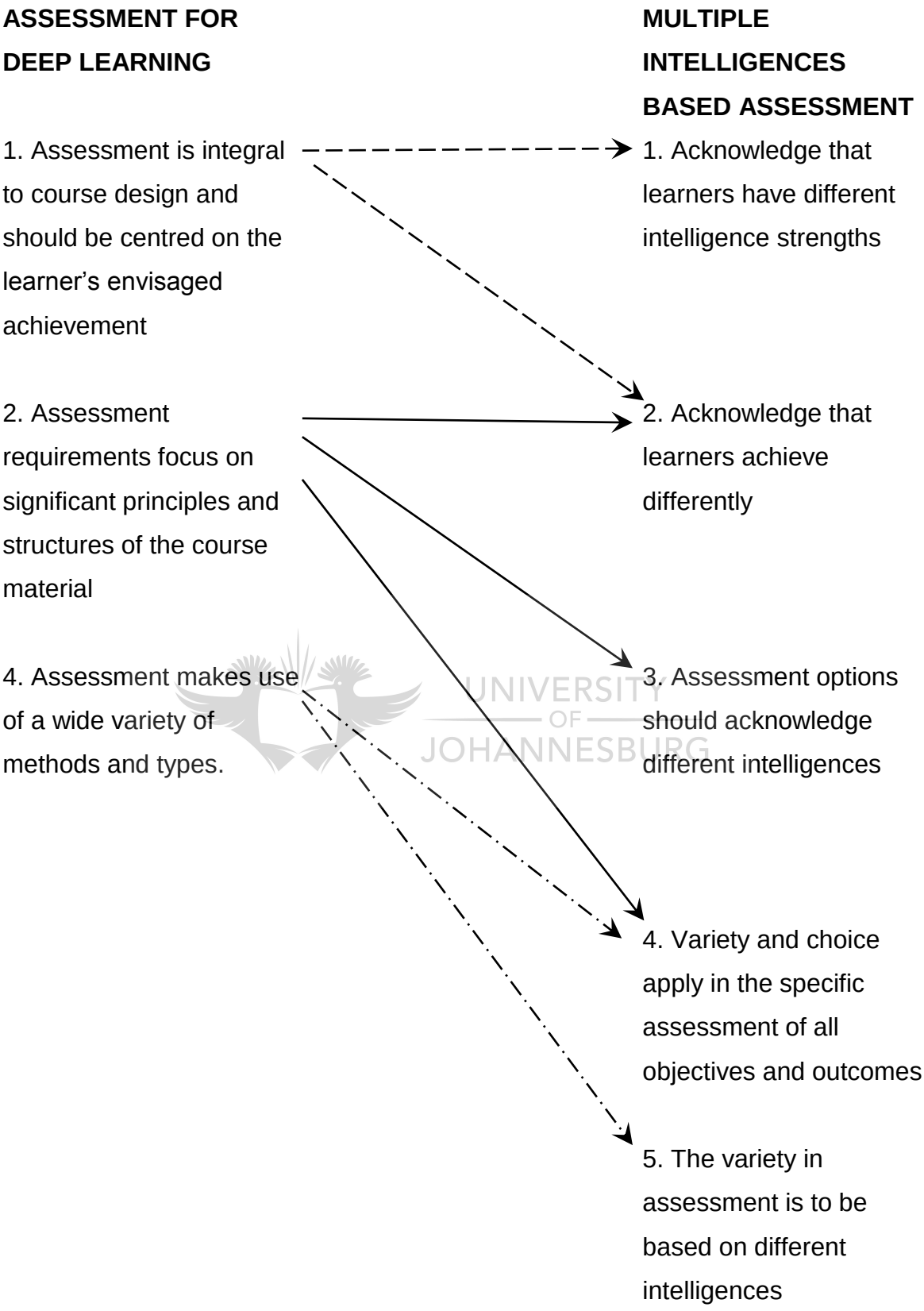
4.6 DERIVING PRINCIPLES FOR MULTIPLE INTELLIGENCES BASED ASSESSMENT FOR DEEP LEARNING

In chapter three, I presented 'Principles for Deep Learning Assessment'; while in this chapter I have presented 'Principles for Multiple Intelligences Based Assessment'. In terms of the research problem for this research, the critical issue was to examine whether the theories of multiple intelligences had a contribution to make to the promotion of deep learning through the assessment of learning. In considering the research problem, I will endeavour to demonstrate a probable relationship between the 'Principles for Deep Learning Assessment' (excluding principles 3&5-7, as they related to good practice in all assessment, not only for

deep learning) and the ‘Principles for Multiple Intelligences Based Assessment’. Having completed that, I will draw the two sets of principles together into the ‘Principles for Multiple Intelligences Based Assessment for Deep Learning’.

4.6.1 Relating the principles for Deep Learning Assessment to the principles for Multiple Intelligences Based Assessment (MIBA)

Both sets of principles referred to have been previously presented; following is a diagram that demonstrates associations and links between the two sets of principles – the links indicated by means of arrows.



While it may be argued that not all the associations are strong, it is my contention that the two sets of principles reflect significant association and that the

association is an indicator that theories of multiple intelligences probably do have a contribution to make to the promotion of deep learning through the assessment of learning. Having demonstrated the association, in the following section I will propose four key principles for the assessment of learning for deep learning, based on the theories of multiple intelligences.

4.6.2 Principles for Multiple Intelligences Based Assessment for Deep Learning (MIBADL)

Based on the association between the 'Principles for Deep Learning Assessment' and the 'Principles for Multiple Intelligences Based Assessment', what follows are the four basic principles of Multiple Intelligences Based Assessment for Deep Learning (MIBADL). Without repeating the arguments already presented in chapter three, I will explain how the needs of assessment for deep learning can be met in the principles for multiple intelligences based assessment, and expressed as MIBADL.

4.6.2.1 Principle 1

The learner's envisaged achievement is integral to course design, acknowledging that learners have different intelligence strengths and achieve differently.

I have already argued, under assessment for deep learning, that the learner's envisaged achievement is to be the central concern of assessment. In terms of theories of multiple intelligences, learners are different; educationally – one of the key areas of difference is that they have different intelligence strengths and consequently achieve differently. If the intention is to assess learners and their envisaged achievement, then multiple intelligences based assessment demands that allowance be made for the differences between learners with respect to their intelligence strengths and the different ways in which learners achieve. The first principle retains the emphasis from assessment for deep learning that the learner's envisaged achievement is paramount in course design; but adds that the way in which that principle can be achieved commences with the

acknowledgement of the differences in intelligence strengths, and with that the reality that learners will achieve differently.

4.6.2.2 Principle 2

The focus is on the significant principles and structures of the course material; therefore, allowance is made for different intelligence strengths, different ways of achieving, and for variety and choice.

The principles for deep learning assessment call for a focus on the significant principles and structures of course material. If significant principles and structures are the focus of assessment for deep learning, then, as for the first principle, differences between learners should not be an unduly advantageous or inhibiting factor. As I argued in chapter one, a challenge in Outcomes Based Education is that while the focus is said to be on the intended outcome or outcomes, the reality is that the method of assessment is generally a default or secondary outcome. What the theory of multiple intelligences contributes, is the understanding that, if significant principles and structures are to be the focus of assessment, then differences between learners should not be permitted to have an undue impact on the ability to demonstrate their achievement in relation to those significant principles and structures. Therefore, this second principle requires that, while significant principles and structures are the focus, it is necessary to make allowance for different intelligence strengths, different ways of achieving, and for variety and choice.

4.6.2.3 Principle 3

Variety and choice in assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.

As has been indicated in principles one and two, one of the most basic and easy ways in which deep learning can be promoted and the desired focus maintained lies in the acknowledgement of intelligence differences between learners. The starting point for the application of these principles lies in this principle, which,

though not directly referring to theories of multiple intelligences, in part bases the call for variety and choice on the acceptance of the intelligence differences between learners. Variety and choice in assessment is to be directly linked to clear and stated objectives and outcomes which are directly linked to the aims and purpose of the course. However, it needs to be understood that the *choice* aspect of these principles is called for because of the intelligence differences between learners. If learners are different, as theories of multiple intelligences argue, then the best way to cater for those differences is to permit learners choice in variety with respect to assessment. However, that variety should be intentional as reflected in the fourth and final principle.

4.6.2.4 Principle 4

A wide variety of methods and types of assessment is utilized, based on an intentional consideration of different intelligences.

In principle three it has been argued that learners should have choice in assessment; in this principle, it is argued that such choice should be based on the intentional consideration of different intelligences. In other words, while choice could be worked into assessment, without a specific practical or theoretical point of reference, it would be of limited significance and value to many learners. Therefore, it is proposed that the variety of methods and types of assessment utilized should be based on the intentional consideration of different intelligences, as expressed in theories of multiple intelligences. The use of an intentional theoretical foundation would meaningfully contribute to the design of assessment that is deliberate, rather than the random determination of variety in and for assessment. Therefore, the point of this principle is that the theories of multiple intelligences be utilized for the intentional development of variety in the assessment of learning.

4.7 A PRACTICAL CONSTRUCT FOR THE APPLICATION OF MIBADL

Having argued and presented four principles for Multiple Intelligences Based Assessment for Deep Learning (MIBADL), this section will operationalize the

principles in a practical construct for the development of assessment items in MIBADL. Having established the theories of multiple intelligences as a foundation for the assessment framework that I have designated MIBADL, attention will be given to how MIBADL could be applied in practice; noting that what follows is only one example of how the MIBADL may be applied.

In applying Gardner's understanding of multiple intelligences, it is arguable that his list of eight intelligences is too cumbersome for most academic contexts, especially in terms of the assessment demand of practicability. As such, I have focused on, though adjusted, Sternberg's more manageable and simpler Triarchic Theory. As a reminder, Gardner proposes eight intelligences, while Sternberg proposed three abilities in a multidimensional intelligence. Comparatively, they may be tabulated as follows:

Table 4.1 Gardner's Intelligences and Sternberg's Abilities

Gardner's Seven *Plus One* Intelligences	**Sternberg's Triarchic Three Abilities**
Linguistic	Componential – analytical/academic
Logical-mathematical	
Musical	Experiential – creative
Spatial	
Bodily-kinesthetic	Contextual – practical
Naturalistic	
Interpersonal	*No parallel*
Intrapersonal	

Working with this tabulation, four intelligence emphases may be derived: academic, creative, practical and relational. While Sternberg does not include a relational dimension in his Triarchic Theory, I would suggest that Gardner's emphasis on the personal dimension of human existence be retained. The intelligence emphases with respect to Gardner and Sternberg are presented in the table below.

Table 4.2 Proposed Intelligence Emphases

Emphases	**Gardner**	**Sternberg**
Academic	Linguistic Logical-mathematical	Analytical/ academic
Creative	Musical Spatial	Creative
Practical	Bodily-kinesthetic Naturalistic	Practical
Relational	Interpersonal Intrapersonal	

Based on these four intelligence emphases, it is possible for the learner to be given assessment options that relate to each of the emphases. As such, assessment items may be structured as follows:

Table 4.3 Intelligences Based Assessment Options

Intelligence emphasis	**Essential emphasis**	**Assessment emphasis**
Academic	*'Write about'*	Written work
Creative	*'Create afresh'*	Creative work
Practical	*'Make anew'*	Practical task
Relational	*'Relate amongst'*	Relational task

Application to the assessment of learning would require that the process of constructing the assessment items could be as follows:

Table 4.4 Application to the Assessment of Learning

Outcome statement/s	Intelligence emphasis	Assessment item	Assessment criteria
	→	→	
Clear statement of intended or required outcome	Academic	Assessment item in *academic* form; for example, an assignment or examination.	
	Creative	Assessment item in *creative* form; for example, an artwork or inventive solution.	
	Practical	Assessment item in *practical* form; for example, a practical task or situational application.	
	Relational	Assessment item in *relational* form; for example, reporting on a relationship or reflective evaluation.	

Two examples may be used to illustrate the manner in which this construct could be applied. The first example applies to the field of Religious Studies, in which the learners are required to reflect on the character and nature of God. Traditionally, learners would be expected either to write an assignment or essay on the topic, or alternatively, they would be required to study prescribed material and then to write an examination. In terms of MIBADL, the following process would be followed: firstly, ensure that the intended outcome is clearly stated; then, secondly, endeavour to construct an assessment item that relates to each of the intelligence frameworks. The result would be as outlined below.

Table 4.5 Outcome Assessment in Religious Studies – An Example

Outcome statement
The learner will be able to demonstrate an awareness and understanding of the various dimensions of the character and nature of God.
Intelligence emphasis and assessment item
Academic:
The learner is to write an assignment that clearly delineates and discusses the various dimensions of the character and nature of God; the final assessment item being a written assignment.
Creative:
The learner is to produce an art, musical or dramatic work that reflects the various dimensions of the character and nature of God; the final assessment item being the artwork, musical score or dramatic script.
Practical:
The learner is to practically demonstrate eight dimensions of the character and nature of God, in the context of a local community of faith, recording their experiences in a journal; the final assessment item being a detailed workbook.
Relational:
The learner is to establish a relationship with a person, previously unknown to them, and in that relationship they are to deliberately live out the relational consequences of the character and nature of God; the final assessment item being a reflective journal.

The second example demonstrates how this approach may be used, even within a more traditional approach to assessment. Consider the subject of Art History, in which the educator is assessing the learners' mastery of an outcome that relates to an understanding of key influences on art through history. The most common approach, in an examination, would be to ask a question that may read: *Discuss, with examples, how the following have influenced art through history....* What would follow would be a list of influences, which the learner would have to discuss, including examples – a typical *academic* approach. In terms of MIBADL, a second

alternative may read: *By means of a drawing of a chair and a dog, illustrate how each of the following has influenced art through history....* Again, a list of influences would follow; however, the learner would now have the option of responding to the influences by means of illustration, a *creative* or *practical* emphasis.

Table 4.6 Examination Assessment in Art History – An Example

Outcome statement   The learner will be able to demonstrate an understanding of key influences on art through history.
Intelligence emphasis and assessment item   ***Academic:***   The learner is to answer the following question: *Discuss, with examples, how the following have influenced art through history....*   ***OR***   ***Creative / Practical:***   The learner is to respond to the following requirement: *By means of a drawing of a chair and a dog, illustrate how each of the following has influenced art through history....*   (In this example, the assessor has chosen not to include a relational emphasis)

4.8 SYNTHESIS

In this chapter, I have examined theories of multiple intelligences, focusing on the work of Gardner and Sternberg. Utilizing their insights, I have argued that the study of literature in chapters two to four presents a theoretical framework for my research and have then developed principles for assessment that may promote deep learning. In this process, I first derived principles for the assessment of learning from theories of multiple intelligences, being:

1. Assessment in the context of theories of multiple intelligences acknowledges that learners have different intelligence strengths.

2. Assessment in the context of theories of multiple intelligences acknowledges that learners achieve differently.
3. Assessment in the context of theories of multiple intelligences requires that assessment options should acknowledge different intelligences and be characterized by variety.
4. Assessment in the context of theories of multiple intelligences applies variety and choice in the specific assessment of all objectives and outcomes.
5. Assessment in the context of theories of multiple intelligences bases variety in assessment on different intelligences.

These principles were then related to the principles for deep learning assessment, to derive a conceptual framework for Multiple Intelligences Based Assessment for Deep Learning (MIBADL), being:

1. The learner's envisaged achievement is integral to course design, acknowledging that learners have difference intelligence strengths and achieve differently.
2. The focus is on the significant principles and structures of the course material; therefore, allowance is made for different intelligence strengths, different ways of achieving, and for variety and choice.
3. Variety and choice in assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.
4. A wide variety of methods and types of assessment is utilized, based on an intentional consideration of different intelligences.

In summary, I have argued that MIBADL is potentially a valuable framework in the endeavour to promote deep learning through the use of meaningful assessment of learning. Based on that I have shown how I took that framework and developed it into a practical tool which I then utilized in my empirical research. In the following chapter I will discuss the research design and methodology, after which I will report on the research, and finally examine MIBADL with a consideration for the way ahead.

CHAPTER 5:
RESEARCH DESIGN AND METHODOLOGY

5.1 INTRODUCTION

In the preceding four chapters, I have presented my research context and problem, followed by a consideration of the assessment of learning. From that basis, I examined the relationship between deep learning and assessment, and then explored the potential contribution of the theories of multiple intelligences to the promotion of deep learning through the assessment of learning. Based on those foundations, I have proposed a theoretical framework for assessment, in the context of theories of multiple intelligences, which I have designated Multiple Intelligences Based Assessment for Deep Learning (MIBADL).

Furthering my research, I proceeded to apply the theoretical framework of MIBADL practically, so as to assess and evaluate what I had proposed. This chapter will present the research design and methodology of the study, explaining the choices that I made and how the research was carried out. Subsequently, in chapter six, I will present the application of MIBADL in my educational setting and the related empirical findings, and then chapter seven will present the research findings and consider related issues. In the context of my research, the focus of this chapter will rest on the choices and decisions that I made with respect to the research design and methodology.

5.2 AN ACTION RESEARCH DESIGN

With respect to research methodology, the most important choice that I needed to make was that of research design. The research design needed to be optimal for the research that I was intending to carry out; namely, the application of MIBADL in my own educational setting, being a lecturer at the Baptist Theological College of Southern Africa. To this end, I chose practitioner action research, a decision that I will explain and justify in this section.

5.2.1 Defining action research

Action research is a research design, the origins of which are generally attributed to the 1940's work of the American social scientist, Kurt Lewin; subsequently finding application in educational research in the work of Lawrence Stenhouse in Britain in the 1970's (McNiff, 2002:¶10). It has been variously defined, reflecting the varied nature and applications of the design type (Dick, 2000:¶16-24; Herr & Anderson, 2005:3; Mertler, 2009:18-19 and Quigley 1997:16); such that Bradbury and Reason (2003:156) have observed that "… action research is best considered a *family* of approaches and practices." Broadly, one could argue that there are two main approaches to action research; namely, practitioner action research and participatory action research (Dick, 2000:¶16-24; MacIsaac, 1996:¶2; Masters, 2000:¶5 and O'Brein, 1998).

Practitioner action research is that action research in which the practitioner is, or practitioners are, endeavouring to research and improve their own practice (Henning, van Rensburg & Smit, 2004:47-48; Huysamen, 1994:76; McNiff, 2002:¶2-3; Mertler, 2009:4; Pring, 2000:131 and Quigley & Kuhne, 1997:24); while participatory action research is that action research in which a community or group is actively included in the research process as primary role players, choosing the action or actions that are directly related to themselves, with or without the assistance of an outsider or outsiders (Ferrance, 2000:3-4; Kemmis & McTaggart in Stringer, 2008:10; McTaggart, 1989:¶2,9,15&16; O'Brein, 1998:¶3-5 and Quigley, 1997:17). Because of this potential breadth, action research has found application in a variety of fields, including anthropology, education, nursing and sociology (O'Brien, 1998:¶39-56 and Riding, Fowell & Levy, 1995:¶3), while more recently making forays into other fields such as Information Systems and Technology (Kock, McQueen & Scott, 2009).

As such, action research could be described on a continuum from practitioner action research to participatory action research as follows:

Practitioner Action Research ← → Participatory Action Research

As the focus of my research was in education, further consideration will be given to the use of action research in the educational setting. In education, action research is growing in importance as a research design for the development and improvement of educational practice and theory (Bradbury & Reason, 2003:156; Glanz, 1999:¶4; Grady in Schwalbach, 2003:1; Herr & Anderson, 2005:17; Koshy, 2005:1-2; Masters, 2000:¶3; Nolen & Vander Putten, 2007:401; Riding et al, 1995:¶2 and Tomal, 2003:5).

The more prevalent use of action research in education is relates to educational practice usually focusing on teachers or lecturers; but also having value for administrators, departmental and institutional heads, government agencies and departments, parents and other interested persons (Ferrance, 2000:6; Mills in Nolen & Vander Putter, 2007:401; Mertler, 2009:5 and Stringer, 2008:10). This broad application is explained by Stringer (2008:1):

> Action research … provides the means for teachers to enhance their teaching and improve student learning…. The flexibility of action research, however, also provides others involved in [education]… – administrators, students, parents, school boards, and so on – with the means to solve many of the problems that are part of the complex life of a school.

However, the value and significance of action research in education is not limited to the improvement of educational practice; it also plays a vital role in the development of educational theory (Bradbury & Reason, 2003:156; Dick, 2000; Koshy, 2005:21 and O'Brein, 1998:¶27). Brydon-Miller, Greenwood and Maguire (2003:15) argue:

> … action research goes beyond the notion that theory can inform practice, to a recognition that theory can and should be generated through practice, and … that theory is really only useful insofar as it is put in the service of practice focused on achieving positive social change.

In other words, out of practice, theory can be derived and developed. The significance of this is that the use of action research in education provides the opportunity not only to improve practice, as important as that may be, but also to

provide the opportunity for the development of educational theory out of educational practice.

Based on the preceding discussion, action research in education may be defined as a research design type by which educators and interested parties may examine and develop educational practice and theory. As such, action research is neither quantitative (objective and numerical) nor qualitative (subjective and interpretive); but in a category of its own (Mertler, 2009:7; Koshy, 2005:86; Schwalbach, 2003:49-52 and Stringer, 2008:39), if anything, inclined toward qualitative research (Dick, 2000:¶21; MacIsaac, 1996:¶3; Koshy, 2005:85 and O'Brein, 1998:¶18). Tomal (2003:5) goes so far as to propose three main research paradigms in social research, namely: quantitative, a scientific approach to undertaking research; qualitative, a naturalistic and emergent approach to enquiry; and action research, a process of solving problems and making improvements. The importance of this proposed distinction is that it demonstrates that action research is not automatically subject to the demands of quantitative and/or qualitative research, which may either be differently applicable or not applicable in action research (Bradbury & Reason, 2003:157; Kock et al, 2009:¶18-29; Koshy, 2005:86 and Stringer, 2008:23).

5.2.2 Choosing an action research design

Understanding that action research in education is a research design by which educators and interested parties may examine and develop educational practice and theory, it was appropriate to choose action research as my research design. As a lecturer, I wanted to examine the three areas previously discussed (the assessment of learning, deep learning and the theories of multiple intelligences) and brought together in MIBADL, as an approach to the assessment of learning that would promote deep learning. As such, I wanted both to examine whether MIBADL would improve my own educational practice, together with that of other educators, and to ascertain whether I could develop a theoretical framework that applied theories of multiple intelligences to the assessment of learning for the promotion of deep learning.

Action research offered a research design type that would contribute positively to the achievement of both goals; namely, the improvement of educational practice and the development of educational theory, in higher education as my context and for the broader educational community. For these reasons I chose to make use of practitioner action research as my research design type. In the following section, I will discuss the practical application of practitioner action research to my particular research, and then show how I applied it to my empirical research.

5.3 POSITIONING THE RESEARCH

5.3.1 Applying action research

In applying practitioner action research, a vital aspect of action research is its cyclical nature. While it may be argued that "… there is no one 'right' way of doing action research, of being a teacher researcher, of engaging in critical reflection…" (Newman, 2000:¶1), it is equally arguable that the most common thread in action research is its cyclical nature and the inclusion of certain basic elements (Kemmis in Herr & Anderson, 2005:5; McNiff & Whitehead, 2002:71 and Stringer, 2008:4).

Mertler (2009:13) explains:

> Numerous authors and researchers have proposed models for the action research process. Because this process is somewhat dynamic, various models look a bit different from one another but possess numerous common elements. They involve some observation of monitoring of current practice, followed by the collection and synthesis of information and data. Finally, some sort of action is taken, which then serves as the basis for the next stage of action research….

For this reason, many scholars have described action research as a research spiral or spiral of research, in which the *entry point* is previous experience and research and the *exit point* is the new entry point for further research (Kemmis & McTaggart in Ferrance, 2000:26; Koshy, 2005:4; McNiff, 2002:¶18 and Stringer, 2008:4). Proposals as to the nature of an action cycle vary according to researchers and scholars; however, the commonality is that each commences with the awareness of an aspect of educational practice or theory that justifies

researching, a consideration of relevant input sources, the application of a possible intervention or strategy, reflection on the intervention or strategy, and consideration for future practice, educational theory and/or research until a desired outcome is achieved (MacIsaac, 1995:¶5; Kemmis in Herr & Anderson, 2005:5; Mertler, 2009:4-5; McNiff, 2002:¶20 and Quigley & Kuhne, 1997:25).

5.3.2 Application to the research

As I have previously explained, action research does not have a single mechanistic approach to application, which required that I give consideration to options that were available. In this light, I examined five proposals, on which to base my own approach to my research; these were:

- Ferrance's five phases of enquiry (2000:9) being identification of the problem area, collection and organization of data, interpretation of data, action based on data, and reflection;
- Glanz's four basic steps (1999:¶8-18) being selecting a focus, collecting data, analyzing and interpreting data, and taking action;
- McNiff's eight basic steps (2002:¶18) being review current practice, identify aspect for investigation, imagine a way forward, try out and evaluate the way forward, modify current action, monitor new action, and review and evaluate;
- Quigley & Kuhne's four core processes (1997:25) being planning, acting, observing, and reflecting;
- Wiersma & Jurs' sequential patterns (2005:22) being identification of the research problem to conclusions and implications into related theory.

What each of these have in common is that the essential process involves the following steps:

Step 1:

The issue for research;

Step 2:

Proposing a possible solution;

Step 3:

Application of a possible solution;

Step 4:

Reflection on the application;

Step 5:

Considerations for the future.

In examining each of these options, I appreciated that there were many more that could have been utilized, as well as the possibility of using one or a combination of the considered options. However, I decided to work with that which is common to the essential process of action practitioner action research, as this would be suitable for my research and there would be no need to intentionally utilize one of the listed proposals.

Therefore, I applied my research to the steps listed above as follows:

Step 1:

Clarifying the issue for research (chapter 1);

Step 2:

I developed and proposed a possible solution for the utilization of theories of multiple intelligences for the promotion of deep learning through the assessment of learning, referred to as MIBADL (chapters 2-4);

Step 3:

MIBADL was then applied in a specific context (chapters 5-6);

Step 4:

The application was reflected on and the empirical findings presented (chapter 6);

Step 5:

A presentation of my research findings and considerations for the future (chapter 7).

As indicated before, this specific study was not the first time that I had explored the possible contribution of a more varied approach to the assessment of learning. Prior to this study, I had made basic endeavours to introduce variety to assessment; including drama, poetry, models, experiences and journals. However, this research was the first time that I had intentionally explored the significance and value of variety in the assessment of learning for the promotion of deep learning. It is also my intention to seek to replicate this study in my current educational setting, which is similar to the one reported on in this study (i.e. a denominational theological college training at Higher education level; see www.malyon.edu.au). This would place this research as the second of three cycles of research:

- Cycle 1: Informal endeavours in variety in assessment
- Cycle 2: This research
- Cycle 3: Possible replication of this research

5.4 RESEARCH SAMPLE AND CONTEXT

5.4.1 The research sample

In quantitative research a key aspect of sampling is that the sample selected should be representative of the population or universe from which it is drawn and which it is intended to represent (Bless & Higson-Smith, 1995:87; Hayman, 1968:40 and Uys & Puttergill, 2000:11,118-123). However, given that action research is associated with a particular practitioner/s or group/s of participants and given that I was researching my own practice, it is accepted that the same demands of sampling for quantitative research are not applicable. Consequently, the action researcher is not required to ensure that their sample is representative of a given population or universe; therefore, use is typically made of a convenience or purposive sample (Koshy, 2005:30; Quigley & Kuhne, 1997:23; Stringer, 2008:42; Tomal, 2003:5 and Wiersma & Jurs, 2005:148).

Therefore, given that my research was located in higher education and I was active in a specific educational setting, the choice of sample was located within my

pre-existing context, meaning that my research would take place in a higher education institution (see following sub-section for details). However, within that institution, I was lecturing from first- to fourth-year level and in three fields of study; namely, Biblical, Pastoral and Youth Studies. This afforded me the opportunity to make an intentional choice as to which course I would use for the research application of MIBADL. This is acceptable practice within action research:

> The action researcher does not set out to seek generalizable data, but to generate knowledge based on action within one's own situation. Any findings from the research are generalizable only within that situation and within the context of the work, which is declared in advance (Koshy, 2005:30).

However, while the action researcher does not seek generalizable data, the choice of sample can contribute to the potential application of the research findings to other contexts. The consequence was that the sample (the learners in the chosen course) was self-selected by virtue of its being the learners I would be teaching in the given semester; while I could be purposive in choosing the particular course for my research. Based on that understanding, I was intentional in choosing the particular course for the application of MIBADL. In the following sub-section, I will describe and motivate the chosen course with respect to the institution within which the research was carried out, the course itself for the research, and a description of the learners enrolled in the course.

5.4.2 The research context

5.4.2.1 The Baptist Theological College of Southern Africa

I carried out my research in 2006 at the Baptist Theological College of Southern Africa (BTCSA, see www.btc.co.za). The College was officially inaugurated on 9 March 1951, under the chairmanship of Dr Doke, and commenced with a learner enrolment of nine (Jonsson, 1980:15); by 2006, the College had grown to an enrolment of 225 learners, 89 fulltime and 136 distance learners. The College is a registered Private Higher Education Institution (PHEI) offering two 120-credit qualifications (a Certificate in Theology and a Certificate in Christian Ministry), a

360-credit Diploma in Theology and a 480-credit Bachelor of Theology degree. In 2008, the College was provisionally accredited to offer a Master of Theology degree. While the medium of instruction is English, many of the learners are not English first-language speakers. Personally, I lectured at the College for over ten years; having commenced as a lecturer in Biblical Studies, later adding Pastoral and Youth Studies. Further to this, I was also involved in certain key areas in the College; namely, curriculum development, general administration and lecturer training.

5.4.2.2 BBS 225, The Pentateuch

For the purposes of my research, I made use of a Biblical Studies course, which is one of eight fields of study taught at the College (the others being Biblical Languages, Church History, Mission Studies, Pastoral Studies, Systematic Theology, Youth Studies, and General and Practical Courses). Within Biblical Studies, at the time of my research, there were a total of eight courses; namely, two introductory courses ('Understanding the Bible' and 'Bible Overview'), three Old Testament courses ('The Pentateuch', 'The Prophets', and 'The Writings'), and three New Testament courses ('The Synoptic Gospels and Acts', 'Pauline Writings', and 'Johannine and General Writings').

I chose to work with the 'BBS 225, The Pentateuch' course, which was taught at second-year level and is a 12-credit / 120 notional hours' course. The course is described in the Course Notes as follows:

> This course in Biblical Studies commences by examining key background issues to the study of the Old Testament. Thereafter, the focus is on the Pentateuch (Genesis to Deuteronomy), with attention being given to introductory considerations, theological themes, and textual exegesis from the book of Genesis (De Jongh, 2006:3).

The outline and contents of the course were as follows:

1. Background issues:
    a. Authorship in ancient times.

b. Oral tradition.

2. Introductory considerations:
   a. The Pentateuch as a whole.
   b. The individual books of the Pentateuch.
3. Theological themes:
   a. The Pentateuch as a whole.
   b. The individual books of the Pentateuch.
4. Textual exegesis:
   Exegesis of selected passages from the Book of Genesis.

(De Jongh, 2006:3)

Derived from the course objectives, the outcomes are presented as follows:

On completion of this course, the learner will be expected to:

1. Discuss the nature of authorship and oral tradition in ancient times, together [with] their impact on the study of the Old Testament.
2. Demonstrate an ability to examine the key introductory considerations of the Pentateuch, as a whole and with reference to its constituent books.
3. Discuss the theological theme of the Pentateuch as a whole, as well as the themes of its constituent books.
4. Meaningfully exegete a selected passage or passages from the Book of Genesis.

(De Jongh, 2006:3)

It is important to emphasize that I made an intentional choice to leave the course content, objectives or outcomes unchanged from the previous occasion that the course had been taught (one year earlier in the second semester of 2005), as I wanted to ensure that my research would not be influenced by any other changes to the course, other than those changes made to assessment in terms of MIBADL.

The reason for the choice of this course was twofold. Firstly, Biblical Studies is generally regarded as a knowledge or theory focused field of studies (together with Biblical Languages, Church History and Systematic Theology), as opposed to other courses which are generally regarded as practically focused (being Mission Studies, Pastoral Studies, Youth Studies, and General and Practical Courses). This would help reduce the potential critique that MIBADL may be useful for practical subjects, but not for the so-called knowledge or theory focused fields of

study. Secondly, being a second level course, it meant that most of the learners were familiar to and with me, which I anticipated would enhance the quality of the research. For example, I anticipated the need for the students to have confidence in me as a lecturer and researcher (something that was fed back to me in the course of the empirical research period). However, I was also aware that this choice would reduce the *distance* between me, as the researcher, and the learners, as the participants, and that it could have a negative impact on my research in that the learners might be more likely to respond in a manner which they would understand to be pleasing to me. My subsequent experience was that the familiarity was most beneficial to the research, as the learners were seemingly more willing to be honest and open, both in terms of positive affirmation and negative critique.

5.4.2.3 The learners

The twenty learners who participated in the research were the fulltime learners in the BBS 225 course; described in terms of age, race, nationality, home language, first language, English status, highest level of schooling and highest tertiary qualification. Most of the learners fell in the age group 20-29, with one aged 30-39 and five 40-49. In terms of race (as per the South African Department of Education definition), there were eight black and twelve white learners. By nationality, the majority were South African; however, there were also Congolese, British, Malawian, Nigerian and Zambian learners. Eleven of the learners spoke English as the language spoken in their *home of origin*; thirteen listed English as their first language, being understood as the language of greatest proficiency; while twelve listed English as their first language (one of the learners indicated a higher proficiency in English than in their home language), with six regarding English as their second language (these figures are correct as per received questionnaires).

Academically, seventeen had completed Grade 12 and three Grade 10-11 (by South African equivalence), the three students who had not completed Grade 12 having been required to successfully complete the Certificate of Theology (equivalent to the first year of the Diploma and Bachelor qualifications) as a Grade

12 equivalence for entry into the Diploma or Bachelor's programme. Of the nine who had completed tertiary qualifications, two had Honours degrees, one a first degree and six a Diploma or Technical Certificate. This biographical data points to a diverse sample; although it may be argued that they did not represent the *typical* cross-section of learners in higher education (notably, as typified in most South African state universities). However, their multi-faceted diversity possibly enriched the research, as it provided an opportunity to explore the application of MIBADL in the context of a more diverse group than might otherwise have been the case.

5.5 DATA COLLECTION

As an action research type is not inherently self-limiting with respect to data collection options (McNiff & Whitehead, 2002:94; Mertler, 2009:35 and O'Brein, 1998:¶28), I was able to choose those options that would best inform the needs of the research, while producing the most meaningful insights. During the empirical research phase of my research, I made use of questionnaires, interviews and a journal.

5.5.1 Questionnaires

Questionnaires are significant for data collection in that they enable the researcher, amongst other things, to collect information easily, to collect information that can be followed up, and to collect initial data (Koshy, 2005:89 and McNiff & Whitehead, 2002:95). My decision to make use of questionnaires was based on two main intentions. The first intention was that the questionnaires were the best way in which to collect baseline data, including biographical details, initial responses and general responses; while the second aim was to make use of the questionnaires as a basis for personal interviews. With respect to the first aim, there was the possibility that the learners would give responses that they might have regarded as satisfying to me (Koshy, 2005:85). With regards to that possibility, it was my judgement that the pre-existent relationship I had with the learners would overcome it (which was subsequently demonstrated to be so) and, on the same basis, I decided that students would use their names on the

questionnaires. This was made known to the learners when the research was introduced to them, by means of the following statement:

> As it will be necessary for me to ask you to complete questionnaires, have one interview, and submit your requirements, I would now like to ask your permission to work with your actual names – rather than codes – through the course and my research. For your understanding, I will not be using anyone's name in my actual thesis. This will help me greatly; but, does anyone have an objection to that?

Based on these considerations, I determined to make use of six questionnaires completed at key moments through the duration of the semester. The initial questionnaire was completed shortly after the introduction to the research and the course; four were completed after the completion and submission of each of the four course requirements; and the final questionnaire was completed at the end of the course. In constructing the questionnaires, I made use of both closed and open questions (McNiff & Whitehead, 2002:95; Mertler, 2009:117-118; Quigley & Kuhne, 1997:32 and Wiersma & Jurs, 2005:169), so as to obtain both objective data (such as biographical information and personal choices) and subjective responses (such as the learners' experiences of and response to the approach to assessment).

The initial questionnaire (see Appendix A) was designed both to obtain biographical data (including personal details, English language proficiency and educational background), and to explore the learners' initial responses to MIBA as expressed in the course material. The following four questionnaires (see Appendix B) were used to give the learners an opportunity to give feedback on the assessment option they had chosen, why they had chosen it, and whether they would make any changes to any of the options available; to assist the learners, the full requirement was reproduced on the back of the questionnaire for easy reference. The final questionnaire (see Appendix C) gave learners an opportunity to reflect on the course as a whole, and made use of only one open-ended item to allow the students to give feedback on their overall experience as they chose. The item simply read, "In the space provided below, kindly reflect on your experiences of the course, with particular reference to the approach to assessment."

By having all the learners complete the questionnaires, I was able to receive comprehensive input and insights into their experience of the course in general and the assessment in particular. In chapter six, I will report on the specific application of the questionnaires and the data produced.

5.5.2 Interviews

Tomal (2003:34) argues that "… conducting interviews can be a powerful technique for an action researcher." This is particularly so as interviews, compared to questionnaires, provide more detailed responses, greater clarification, deeper insights and useful perspectives (Altrichter, Posch & Somekh, 1993:101; Koshy, 2005:93; McNiff & Whitehead, 2002:96; Schwalbach, 2003:64 and Stringer, 2008:32-33). As Stringer (2008:32-22) explains, "The use of interviews as a central component of action research enables us to listen carefully to what people say, to record and represent events in their own terms, and to use their perceptions and interpretations…."

In my research, all learners completed six questionnaires, with the exception of one learner who withdrew from the course. However, each learner was subjected to one semi-structured and open interview (Quigley & Kuhne, 1997:33) following the submission of a questionnaire. Being semi-structured and open, the interviews enhanced my understanding of the experiences of the learners (Wiersma & Jurs, 2005:186-187). For the learners, the interviews gave an opportunity for deeper feedback and responses than in the questionnaires, while also giving the freedom to input their own reflections into the course and my research. One significant value would prove to be the unsolicited input from a number of the learners.

Practically, I purposively allocated learners to interview groups according to overall academic ability, based on their average marks in their first year of study. The intention was to ensure that each set of interviews included learners from a cross-section of academic ability, so enhancing the insights gleaned and avoiding clusters of similar academic ability within interview groups. The interviews commences by asking questions of clarification with respect to the learner's completed questionnaire, following this with open questions in which the learners

and their answers tended to direct the flow of the interview. A consequence was that I was able to ensure that questionnaire answers were clarified where necessary; but, from there on, interviews sometimes remained quite focused on the course and issues specific to the questionnaire, while on other occasions it broadened and explored different aspects of the approach to assessment.

The combination of questionnaires and interviews proved to be very effective, as the questionnaires ensured that all learners had an opportunity to give feedback throughout the research period; while the interviews gave each learner one meaningful opportunity to give more significant input with regards to their experience of the approach to assessment (MIBA).

5.5.3 Personal research journal

My final data collection method was that of a personal journal, of which Mertler (2009:70) comments, "Regardless of your specific area of focus, journaling is recommended as a way to keep track of not only observations but feelings associated with the action research process." A journal can be used in a variety of ways, from detailed recording to general observations, and is a very valuable tool for the action researcher (Koshy, 2005:97-98; McNiff & Whitehead, 2002:94 and Schwalbach, 2003:59). While I did not make use of a journal to keep detailed records, it was an important means of recording important observations and personal emotions throughout the research period (relevant details are found in chapter 6). Together with the questionnaires and interviews, the three sources of data (questionnaires, interviews and journal) were utilized for the detailed analysis. Consequently, the questionnaires, interviews and journal combined to provide a critical record of the research and its progress. A comprehensive analysis of the data is found in chapter six, while my approach to that analysis is described in the section immediately following.

5.6 DATA ANALYSIS

With respect to data analysis, the main focus rested on the sections of the questionnaires that either gave options for response or were open-ended, and on

the data obtained in the interviews with the learners. While attention was given to basic quantitative data (such as how many learners made certain choices), most of the data was qualitative. Referring to qualitative data, Stringer (2008:39) points out that data analysis "… usually focus[es] on *understanding* peoples' experience and perspectives as a common outcome of the research process." As such, the aim of such analysis is to examine the data systematically and to extract the content that is relevant to the research aims through a process of content analysis (Huysamen, 1994:142 and Stringer, 2008:87), by means of an inductive process. This process has been described by Mertler (2009:14) as one in which "… the researcher begins with specific observations (i.e., data), notes any patterns in those data, formulates one or more tentative hypotheses, and finally develops general conclusions and theories." Therefore, the main steps of data analysis would involve the processing and reduction of data, the presentation and description of the main characteristics and features, and the interpretation of the data and drawing of conclusions (Altrichter et al, 1993:122; Koshy, 2005:113; Mertler, 2009:123&140; Stringer, 2008:89&92 and Tomal, 2003:97).

My data analysis is presented in chapter six, where I present a basic description of the application of MIBADL, and then give detailed consideration to the analysis of the raw data obtained through the learner questionnaires, interviews with learners and my research journal. In this, I have processed and reduced the data for the benefit of the reader, and then presented and described the main characteristics and features of the data. Based on this, I then present my empirical findings, from which chapter seven moves to present the research findings.

Stringer (2008:99) argues that the presentation of data from the participants should, as far as possible, be presented in "… the participants' own talk…," which is what I have done. I have also endeavoured to present as much of the data as possible (Costello, 2003:7), while exercising caution to ensure the inclusion both of data that supported MIBADL (as applied) and data that was *against* MIBADL (Altrichter et al, 1993:120&131).

In summary, my data analysis sought both to analyze (Huysamen, 1994:142) and interpret (Stringer, 2008:89) the raw data in a manner that was faithful to that

which was received from the learners in the questionnaires and interviews, as well as that recorded in my research journal.

5.7 ETHICAL CONSIDERATIONS

Ethical considerations are critical to all research, especially with respect to the accuracy, credibility and dependability of the research (Bless & Higson-Smith, 1995:102-103 and Huysamen, 1994:178-186). In the context of my research, I identified four specific concerns that needed to be addressed; namely, volunteer participation, privacy and confidentiality, alleviating harm, and researcher-participant relationship (McNiff & Whitehead, 2002:88; Mertler, 2009:48; Nolen & Vander Putter, 2007:402-403 and Stringer, 2008:45-46).

5.7.1 Volunteer participation

As has been explained, my research was carried out in the context of my regular work as a lecturer, where I had previously experimented with variety in the assessment of learning. However, due to the formal nature of my research, and the use of an approach to assessment that was substantially different to what the learners would have previously experienced, it was necessary for me to ensure that I adhered to the key ethical considerations with respect to volunteer participation. The main concerns, with respect to volunteer participation, are informed consent, voluntary participation and written consent (Brydon-Miller & Greenwood, 2006:125; Herr & Anderson, 2005:118; Nolen & Vander Putter, 2007:403 and Stringer, 2008:46). All of these were addressed in the context of having obtained institutional consent for the research. This consent was obtained by means of an oral presentation of my intended research to the then serving College Registrar, who, in turn, submitted that to the College Council for approval. Further to this, the currently serving College Principal reaffirmed the permission to identify the Baptist Theological College of Southern Africa as the location of the research.

With respect to informed consent, I commenced the first lecture of the semester with an oral introduction to my research, explaining that the course would form part

of my doctoral research, briefly introducing the research and explaining the main difference in the course when compared to others. During the introduction, I afforded the learners the opportunity to ask questions for clarity so as to enhance their understanding of what they would be committing to. I informed them that on completion, they would again be afforded the opportunity to ask further questions and I indicated that, should any concerns arise during the course, they were free to speak to me about these at any time during the course.

While the BBS 225 course was compulsory for all learners (fulltime and distance), my research was applied to fulltime learners only. In that context, the fulltime learners were granted the opportunity to decline to participate in the research by remaining in lectures, but completing the traditional requirements as set for the distance students. These traditional requirements were the submission of two research assignments and a written examination. It was important for me to ensure that this was a real option and that the students who declined to participate would not be disadvantaged in any way (Brydon-Miller & Greenwood, 2006:125; Herr & Anderson, 2005:118 and Nolen & Vander Putter, 2007:405).

In this endeavour to ensure voluntary participation, I reinforced the intent of the initial oral introduction on a number of occasions in the early stages of the course. There was one learner who, despite signing a consent form, initially chose to complete the traditional requirements; however, after further one-on-one dialogue on the nature of the research and the extent of the research requirements, the learner decided to continue with the research requirements. This learner also proved to be a valuable source of input through the questionnaires completed and interview, in terms of both positive and negative critique. It should also be noted that one of the initial learners subsequently withdrew because of work pressures, not because of any concerns or problems with the course and the assessment requirements.

The final step, with respect to volunteer participation, was to obtain the learners' written consent. This was received by a signed and dated declaration which read:

> Having been introduced to the research that Dr Charles de Jongh is carrying out in the BBS 225 course (2nd semester 2006), I hereby give my informed consent for inclusion as a participant in the intended research.
>
> I understand and acknowledge that I have been given the option of objecting to being part of the research, and completing the course in terms of the standard course requirements.

All students were willing to sign the form, including the one learner mentioned earlier, who would have been given the opportunity to withdraw his written consent if he had finally chosen to complete the traditional assessment requirements.

5.7.2 Privacy and confidentiality

Privacy and confidentiality relate directly to the extent to which the identity of participants is exposed to both the researcher and the readers of the research (Stringer, 2008:46). With respect to my research, there were two areas that needed to be addressed; namely, the identity of questionnaire respondents to researcher and the individual identities of participants to readers of the research. Mertler (2009:105) defines anonymity as *not knowing*, while confidentiality is *knowing but not revealing*; in both areas, I needed to make a choice between anonymity and confidentiality.

With respect to the identity of questionnaire respondents, I chose confidentiality, as I wanted to use the completed questionnaires as the basis for the one-on-one interviews. The learners were made aware of this in the oral research introduction and there were no objections. My assessment was that my pre-existent relationship of trust with most of the learners meant that they were not concerned about anonymity; while their subsequent responses, in terms of both positive and negative critique, indicate that this was probably the case. In relation to the identification of learners to the readers of the research, I chose anonymity, as there were no reasonable grounds for the identification of the participants – not even by means of codes. The long-term anonymity of the learners will be protected in that all records will be destroyed on completion of this research.

5.7.3 Alleviating harm

The general principle applied with respect to alleviating harm is that of beneficence, where the benefits of the research are deemed to outweigh any possible harm or risk (Herr & Anderson, 2005:121-122). "Generally speaking, it is unethical and sometimes illegal to conduct research that exposes participants ... to harm of any kind, including physical, emotional, and psychological harm." (Mertler, 2009:34). While it may be argued that the research I was doing was not going to cause any harm, it was still necessary for me to acknowledge that there were risks attached to the research. Examples of such risk included the simple failure of what was being applied, a breakdown of trust between the learners and the researcher, and poor academic performance because of MIBA.

As it was my intention to apply MIBA to all the fulltime learners, any benefits would have applied to all the learners. Consequently, I was aware that the greater concern needed to be the possible negative consequences of the research, especially on the marks attained by the learners. This I dealt with through the College's ability to take remedial action in the event that the proposed benefits were not materializing or had not materialized – although this proved unnecessary. What lessened the risk was that I had already begun to revise my approach to the assessment of learning and, on that basis, felt confident that the probability of a negative outcome was low.

5.7.4 Researcher-participant relationship

There is always a relationship between the researcher/s and participants in research; however, because practitioner action research takes place in the practitioner's existing environment, that relationship is an important ethical consideration. Historically, past experiences of participants can contribute to the research in either a positive or negative manner (Nolen & Vander Putter, 2007:403); there can be a blurring of the distinction between researcher/s and participants (Bradbury & Reason, 2003:157); and the quality of the relationship can impact on the quality of the research (Mertler, 2003:34).

In the context of my research, I had a pre-existent relationship with most of the learners in that they had already completed three semesters of study at the College, during which time I would have lectured them in no less than three semester-long courses. Additionally, the size of most classes was no more than 25 on average, which meant that there was also a level of personal relationship, beyond the strictly professional. The question was whether this would impact positively or negatively on my research. At the commencement of the research, this was something of an open question; however, the willingness of the learners to be both positively and negatively critical indicated that the relationship was healthy and contributed positively to the research. Subsequently, it was noticeable that most of the learners expressed critical concerns in both the questionnaires and in interviews.

5.8 RIGOUR AND TRUSTWORTHINESS

In quantitative research designs, great emphasis is laid on reliability and validity (Bless & Higson-Smith, 1995:130; Eisenhart & Borko, 1993:92; Mouton, 1996:144 and Wiersma & Jurs, 2005:9); reliability being concerned with the consistency and accuracy of measures in research, while validity refers to the extent to which the research findings may be trusted. However, numerous action researchers have argued that even though the demands of reliability and validity are important, they do not apply in the same manner to action research. Rather, the case is made for rigour and trustworthiness as the most important when examining action research (Kock et al, 2009:¶27; Koshy, 2005:30; McNiff & Whitehead, 2002:108; Mertler, 2009:24 and Stringer, 2008:48), rigour being associated with the level of quality in action research (Mertler, 2009:24), and trustworthiness referring to the extent to which the research can be trusted (Stringer, 2008:48).

While a precise definition of rigour and trustworthiness is debated amongst action researchers (Stringer, 2008:48); Mertler (2009:24) defines rigour as "... the level of quality in action research ... [referring] to the quality, validity, accuracy, and credibility of action research and its finding," while Lincoln & Guba (Stringer, 2008:48) argue that trustworthiness is attained when action research is credible, transferable, dependable and confirmable. In the light of these two definitions, it

may be argued that action research is rigorous and trustworthy when it has been shown to be valid, credible, dependable, and transferable.

5.8.1 Validity

While validity in action research has been variously defined, the main concern is that research data is accurately recorded and reported (Eisenhart & Borko, 1993:92; Mertler, 2009:114&126 and Schwalbach, 2003:8); therefore, the concern of validity in action research is accuracy. With respect to validity, there are the potential dangers of history, instrumentation, attrition, the Hawthorne Effect, researcher bias and contamination (Tomal, 2003:81). In responding to the challenge of validity, I endeavoured to ensure that all data collection was done as accurately and efficiently possible. With respect to the dangers, I responded as follows to the items that might have impacted on the accuracy of my data collection. Firstly, with respect to history, the delay between an event and the data collection, I ensured that all questionnaires were completed at the same time as the aspect or event that they related to, ensuring that there was limited, if any, loss of memory on the part of the learners. Secondly, with respect to instrumentation, the impact of data collection methods, I sought to develop the questionnaires in a manner that would make for clear and easy responses, while the interviews were carried out in a relaxed, yet structured, setting, taking notes during the interviews. A third danger, attrition, the loss of participants, only resulted in the loss of one student out of a group of twenty, being a 5% loss and having a negligible impact on my research. With regards to the Hawthorne Effect, in which attention given motivates better performance, the learners were never given special attention and were all treated equally in terms of the research. The fifth potential danger was that of researcher bias, in which my own preferences could affect the outcome of the study. This was limited by means of the use of questionnaires and interviews, as well as my research journal. This meant that the interpretation of the learners' experiences was not limited to my own observations and understandings. The final danger of contamination, negative factors impacting on the research, did not materialize and the course was completed satisfactorily.

5.8.2 Credibility

Credibility refers to the plausibility and integrity of the research, especially with respect to the conclusions drawn and inferences made (Herr & Anderson, 2005:54 and Lincoln & Guba in Stringer, 2008:48). Stringer (2008:49-50) suggests that it is achieved through prolonged engagement, persistent observation, triangulation, participant debriefing, diverse case analysis, referential adequacy and member checks. In terms of my own research, I applied prolonged engagement and triangulation. The call for prolonged engagement was achieved in that the research took place over an entire semester and covered four separate assessment items. This made it possible to track responses not only over an extended period of time (about four months), but also over a meaningful number of assessment items (four as opposed to one), which met the requirement for persistent observation. Triangulation is the requirement that no conclusions are drawn in action research unless they are substantiated by at least three sources of data (Mertler, 2009:11&249; Mills, 2007:57&86 and Schwalbach, 2003:9). By making use of questionnaires, interviews and a research journal, the demands of triangulation were met.

5.8.3 Dependability

An important dimension in the evaluation of the credibility of action research is that of dependability, which demands that the "... research processes are clearly defined and open to scrutiny." (Lincoln & Guba in Stringer, 2008:48). In other words, consideration is given to the adequacy of the research procedures for the study (Stringer, 2008:50). To meet this requirement, it is necessary for the research report to be clear, concise and comprehensive, so as to enable the reader to evaluate the dependability of the research. This chapter in particular, and the entire research report in general, is the main vehicle for meeting the requirement for dependability. This chapter presents the research design and methods, explaining the research decisions that have been made and demonstrating how they have impacted on my research. The rest of the research report gives the reader the data, evaluation, conclusions and recommendations of the research. Together they grant to the reader the opportunity to scrutinize the

research and to draw their own conclusions with respect to the dependability of my research.

5.8.4 Transferability

Generalizability in empirical research refers to the extent to which the research findings and inferences can be generalized to a larger population and is often referred to as external validity (Herr & Anderson, 2005:50). However, most action researchers would argue that because their research relates to their specific context, and is highly contextualized, generalizability is not an important factor in action research (Huysamen, 1994:177; Koshy, 2005:30; Mertler, 2009:96 and Wiersma & Jurs, 2005:12). However, in action research, transferability requires attention. Understanding that action research is not concerned with replication, attention needs to be given to "... whether the results might be applied [transferred] to other contexts than the research setting." (Lincoln & Guba in Stringer, 2008:48). Though not a rigid criterion (McNiff & Whitehead, 2002:107), the challenge of transferability is that the research report should give sufficient data to enable readers to take advantage of the research in their own setting (Stringer, 2008:50). Therefore, the demand is that the research report include all relevant contextual data and information to enable the reader, firstly, to consider possible application in their own context and, secondly, to contribute to such application where desired. My research report presents a detailed description of the context and setting of my research, together with a detailed description of the processes by which the research was carried out, while concluding with a critique of and *way ahead* for what I have proposed, especially with respect to MIBA. This report makes it possible for any other educator to transfer applicable aspects of my research into their educational setting, while acknowledging differences between my research setting and their educational setting. Personally, as I have indicated, it is my intention to transfer this research into my current educational setting, while acknowledging that it is different to the setting of the original research.

5.9 SYNTHESIS

In this chapter I have explained how I chose practitioner action research as my research design type. I have examined the critical issues of positioning my research into practitioner action research, addressed the issues of sample and context, described my data collection methods and the associated approach to data analysis, discussed the ethical considerations relevant to my research, and demonstrated how I addressed the challenges of rigour and trustworthiness. Following on, chapter six will examine my application of MIBADL, present the acquired raw data, analyze that data, and present my empirical findings. This will be followed in chapter seven with a presentation of my research findings; including a critique of MIBADL, an examination of the contribution of the proposed approach to the assessment of learning, and a consideration of a way ahead from my research.

CHAPTER 6:
AN APPLICATION OF MULTIPLE INTELLIGENCES BASED ASSESSMENT FOR DEEP LEARNING

6.1 INTRODUCTION

In the preceding chapters, I have examined a potential response to the research problem of the possible contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning. I have examined the challenges of the assessment of learning, related those to deep learning and then considered the theory of multiple intelligences. I have presented a theoretical framework that has been conceptualized in the principles of Multiple Intelligences Based Assessment for Deep Learning (MIBADL). I also suggested in the preceding chapter how MIBADL may be applied in the authentic context of assessment in higher education. In this chapter, I will be relating how I went about the application of MIBADL in a specific lecturing situation that was part of my regular lecturing experience and responsibility. Having presented that, the focus of the remainder of this chapter will be a presentation of the data obtained through questionnaires and interviews, together with my research journal and the analysis of the assessment submissions. The data is analyzed and then integrated, and my research findings are presented in the context of my three research questions (previously presented in chapter 1).

6.2 APPLICATION AND PROCESS

In my preparation for the application of MIBADL, I made use of the practical construct presented in chapter four (see 4.6 A Practical Construct for the Application of MIBADL) that required all assessment items to be developed in the context of a clear statement of the relevant outcome or outcomes, with reference to four intelligence emphases (academic, creative, practical, relational) and the related assessment item together with a statement of assessment criteria (see Table 4.4 and Table 6.1 following).

6.2.1 Developing the assessment items

As my research design was action research and my focus the assessment of learning, it was necessary to ensure that I only made changes to assessment, while leaving the rest of the course unchanged. In so doing, I was better able to assess and evaluate MIBADL, as there were no other intentional changes that might have contributed to my empirical findings, whether negatively or positively. Consequently, I made use of the previous year's course material, with very few editorial adjustments, and only made changes to the assessment requirements. In doing this, I worked with the table that I presented in the preceding chapter; repeated here in the form that I utilized as my starting point.

An important point to be made at this juncture, is that it would have been optimal to set one assessment item at a time, monitor the learner responses and then make adjustments, if necessary, to the following assessment item. However, the imposed requirement of the Higher Education Quality Committee was that no changes were permitted to be made to assessment during the teaching of a course. This meant that all assessment items were to be made available to the learners at the commencement of the course, and were not to be altered or changed during the semester. This meant that, in terms of action research, it was not possible to work with smaller action research spirals between assessment items, and that all the assessment items fell into one research spiral.

As previously presented, I commenced the development of assessment items by making use of the practical construct presented in chapter four and refined as presented below.

Table 6.1 Initial Guide for the Preparation of Assessment Items in MIBADL

GUIDE FOR THE PREPARATION OF ASSESSMENT ITEMS IN MIBADL			
Outcome statement/s	**Intelligence emphasis**	**Assessment item**	**Assessment criteria**
	→	→	*The learner should ensure that they:*
	Academic		
	Creative		
	Practical		
	Relational		

I reproduced this construct and worked with each of the four course requirements in the following manner: insert the required outcome statement, consider the intelligence emphases, construct an actual assessment item, and determine the assessment criteria. While I did not make use of the assessment criteria as an assessment rubric, it was significant to note that one of the learners later suggested to me that the use of an assessment rubric would have been beneficial to them, as it would have given them a better framework within which to understand the demands of the *non-traditional* assessment items. The developed assessment items are presented at the relevant places in this chapter (see 6.3.2.1, 6.3.3.1, 6.3.4.1 and 6.3.5.1).

Considering the challenges presented by each of the intelligence emphases, the first intelligence emphasis, being the academic, was both simple and complex. Simple in that it is the intelligence emphasis that is most common to higher education, as well as the contemporary expectation and expectations of assessment in higher education. However, it was complex in that I was working

toward ensuring that the assessment items would promote deep learning, and therefore needed to ensure that I did not develop assessment items that would undermine deep learning or implicitly advance superficial learning. The second and third intelligence emphases, creative and practical, were challenging to construct and develop, mainly because of their difference to the dominant academic approach. However, because I had previously worked informally with options like these, I did not find it too difficult to work out the requirement options in these categories. The main concern that I had regarding these options was that of the assessment of the learner submissions, especially in relation to the technical aspects of certain of the potential submissions; however, the use of assessment criteria assisted the learners in appreciating the demands of the assessment items. That said, with academic written work the learners have access to a *College Assignment Writing Guide*; but they had no similar guide to, for example, a painting that reflects on theological themes or a Bible Study that is presented in a simulated setting. While this challenge was very real, I decided that I could not address it in the specific context of this particular course and cycle of action research.

The most difficult intelligence emphasis was the relational option, where I felt that I *forced* the possibilities more than in any of the other intelligence emphases. When I started developing the relational options, I began by working with a *learner-others* dynamic. However, in the light of Gardner's emphasis on both interpersonal and intrapersonal intelligences, I added in the *learner-self* dynamic. In addition, as the field I was working in was Christian ministry and theology, there was also the possibility of the *learner-God* dynamic. I am aware that some may challenge the relationship with God option; however, because my context was a theological college, I added this dynamic to my consideration, without intentionally moving into the realm of spiritual intelligence. This all meant that I worked within the broad relational dynamic of *learner-others/self/God*. The question that I never answered in developing the relational options was whether or not the *forcing* of assessment items into the relational option was a problem. In my research journal, I commented, "Not sure right now." One further outstanding question was whether all the relational items I developed were actually relational and not practical. This question I similarly left unanswered at the time; but did suggest to myself that the

way ahead might be to combine the practical and relational options into a single practical/relational option.

In relation to all the options that I developed, my main challenge related to the communication of the technical requirements for the assessment options other than the academic. In practice, the challenge was not limited to the learners' knowing what was expected of them, it also extended to the related personal challenges of assessing the items. In the broader context, I also realized how difficult it was to move away from the common approach to assessment in higher education, even if the desire and intention were there. At the point of having completed the requirement options, I simply concluded, "Let's see what happens."

An important consideration was whether I would place limits on the learners' choice of requirement options. My concern was that most of the learners would opt for the traditional academic options; a concern that later proved to be unfounded. However, I also did not want to force learners to make choices they really would not want to. Balancing these two concerns, I chose to require that the learners choose a maximum of three of the same intelligence emphases. For example, they could only choose the academic option three times, but the fourth would need to come from another option. To achieve this, without revealing to the learners the nature of the options, I gave the same option the same number across the four requirements. As such, the academic options were all numbered *1*; with the creative being *2*, the practical *3*, and the relational *4*. Although this was not revealed to the learners, it was interesting that some of the learners picked up the similarities across the numbers. What follows is a discussion of the specific assessment items developed in relation to the four course objectives. In presenting the assessment items, reference is made to relevant sources where the given comment, explanation or observation relates to a deep approach to learning.

6.2.1.1 Requirement one – Background issues

Utilizing the *Guide for the Preparation of Assessment Items in MIBADL* (see table 6.1), I prepared the following options for requirement one, which related to the course outcome, "Discuss the nature of authorship and oral tradition in ancient

times, together with their impact on the study of the Old Testament" (De Jongh, 2006:6), which were presented to the learners as found in Appendix E.

Considering the preparation of the specific items in the context of the required intelligence emphasis, I would reflect on each as follows. The **first item**, related to the academic intelligence emphasis, was as follows: "Write an assignment (1200-1500 words) that explains the nature of authorship and oral traditions in ancient times, demonstrating how these impact on the study of the Old Testament. Use a bibliography of no less than four meaningful references" (De Jongh, 2006:6). While the first part of the item was somewhat reproductive of that which the learners would have received in lectures and could access from various texts, the second part required them to show that they had a deeper appreciation and understanding of the material as they integrated an understanding of different topics (Chalmers & Fuller, 1996:7). It meant that the learners would not be able to complete the item without adequately demonstrating that they had understood the deeper aspects of the topic (Ramsden, 2003:47); notably, the impact of authorship and oral traditions on the study of the Old Testament. It was my anticipation that particularly the second part of the item would contribute to deep learning on the part of those learners who chose this.

The **second item**, related to the creative intelligence emphasis, required the learners to:

> Write a story (800-1500 words) that will explain how authorship and oral tradition in ancient times impacts on the study of the Old Testament. Your submission should clearly indicate the age of the intended reader, and must not include quotes. However, your sources should be listed in a bibliography, of no less than four meaningful references, at the end of the story (De Jongh, 2006:6).

In this item, it was my intention that the learners would be compelled to be meaningfully familiar with the content of the material (Biggs, 2003:12); but, that the need to use the material in the writing of a story would demand meaningful engagement with the material (Marton & Säljö, 1984:46). Allowing learners to use a creative medium, in this case a story, would give an opportunity to those who

might be stronger in the creative realm to utilize that strength, while still needing to demonstrate an appreciation of the main issues which would promote deep learning (Bowden & Marton, 1998:49).

The **third item**, related to the practical intelligence emphasis, asked the learners to:

> Prepare a chapter (800-1500 words) for a book that explains the nature of authorship and oral tradition in ancient times, including an explanation of how these impact on the study of the Old Testament. The use of diagrams and illustrations is encouraged, with references as required (De Jongh, 2006:6).

In this item, as with the others, the learner would be required to have mastered the content of the material (Ramsden, 2003:60); however, in the development and preparation of the chapter, they would need to be practical and were given freedom, for example, to make use of diagrams and illustrations. As with the second item, the demand for a practical application of the material was intended to promote deep learning as it required the *manipulation* thereof (Ramsden, 2003:46). While it may be argued that this option could also be creative, it became apparent that an assessment item would not always be strictly defined.

Finally, the **fourth item**, related to the relational intelligence emphasis, required that the learner should:

> ... as the relevant material is taught in lectures, keep a journal that records your growing understanding of authorship and oral tradition in ancient times, how you respond to the implications, and what your own conclusions are. The journal should be no less than twelve A5 pages or six A4 pages, and may be in your own handwriting (De Jongh, 2006:6).

Within this intelligence emphasis, the main relational dimension was the *learner-self* dimension. In this item, as before, learners would need to master the content of the material; however, the journal granted them an opportunity not only to demonstrate the necessary understanding, but also to reflect further in the realm of the self (Biggs, 2003:12 and Ramsden, 2003:43&52). My anticipation was that

the opportunity to self-reflect would promote deep learning in that the learners would be motivated to consider and demonstrate the impact of the material on themselves and so personally integrate the topics examined (Fry et al, 2003:18).

6.2.1.2 Requirement two – Introductory considerations

Utilizing the *Guide for the Preparation of Assessment Items in MIBADL* (see table 6.1), I prepared the following options for requirement two, which related to the course outcome, "Demonstrate an ability to examine the key introductory considerations of the Pentateuch, as a whole and with reference to its constituent books" (De Jongh, 2006:7), which were presented to the learners as found in Appendix G.

Considering the preparation of the specific items in the context of the required intelligence emphasis, I would reflect on each as follows. The **first item**, related to the academic intelligence emphasis, was as follows: "Study for and write a one-hour test that will evaluate the ability to examine the key introductory considerations of the Pentateuch, as a whole and with reference to its constituent books. The test will be written on the due date indicated below" (De Jongh, 2006:7). In choosing a test for the academic emphasis, I was motivated primarily by the need to ensure that the academic items were not all the same; because the first requirement was assessed by means of an assignment, I felt that the use of a test would be acceptable in that it was different and reasonably well suited the content of this section of the course. In drawing up the test, the main challenge was how a content based section could be tested in a manner that would promote deep learning. My observations on the effectiveness of the test are recorded later under 'research response'.

The **second item**, related to the creative intelligence emphasis, required the learners to:

> Choose one of the books of the Pentateuch and prepare a chapter for a children's book – using illustrations and text – that introduces the book in terms of name, author, outline, contents and theology. The submission should indicate the

> intended age of the readers (not exceeding age sixteen), and must list no less than four meaningful references (although quotes and references in the text are not required) (De Jongh, 2006:7).

In this item, it was my intention that the learners would be compelled to be meaningfully familiar with the content of the material (Marton & Säljö, 1984:46); but, that the need to use the material in the writing of a chapter for a children's book would compel them to demonstrate a deeper understanding of the material, especially in that the chapter would be for a children's book (Bowden & Marton, 1998:8). Allowing learners to use a creative medium would give an opportunity to those who might be stronger in the creative realm to utilize that strength, while still needing to demonstrate an appreciation of the main issues and so endeavour to promote deep learning (Ramsden, 2003:43).

The **third item**, related to the practical intelligence emphasis, asked the learners to:

> Prepare a poster that presents one of the books of the Pentateuch in terms of name, author, outline, contents and theology. The poster should be at least A2 in size, and creativity is strongly encouraged. A small block on the poster should list no less than four meaningful references (although quotes and references in the text are not required) (De Jongh, 2006:7).

In this item, as with the others, the learner would be required to have mastered the content of the material; however, in the development and preparation of the poster, they would need to be practical and would need to address the challenge of condensing the material onto a single sheet poster (Bowden & Marton, 1998:61). As with the second item, the demand for a practical application of the material was intended to promote deep learning as it required the condensation and manipulation thereof, something that would be difficult if the material were not properly mastered and understood (Ramsden, 2003:42). As previously observed, this option could also be regarded as creative; at this stage, I began to ask whether it is possible to make a neat distinction between creative and practical options.

Finally, the **fourth item**, related to the relational intelligence emphasis, required that the learner should:

> In the context of a Bible Study or similar group, present a study that explores one of the books of the Pentateuch in terms of name, author, outline, contents and theology. As part of the study, allow the group to respond to and interact with you, around what they are studying. The submission should be a mini portfolio including a copy of your study notes, any handouts, and a 600-800 words personal reflection on the experience and interaction (De Jongh, 2006:7).

Within this intelligence emphasis, the main relational dimension was the learner-others dimension. In this item, as before, learners would need to master the content of the material; however, the preparation of material and the presentation of the study granted learners an opportunity not only to demonstrate the necessary understanding, but to utilize it relationally in a setting that many of them were either already involved in or might be in the near future (Marton & Säljö, 1984:45-46). In this, the authenticity of this assessment item was arguably higher than in the other items. I also felt that the presentation of the material in a Bible Study would demand that the learners internalize the material prior to the actual completion of the assessment item (Atherton, 2005a:¶5); this could be a mechanism for the promotion of deep learning.

6.2.1.3 Requirement three – Theological themes

Utilizing the *Guide for the Preparation of Assessment Items in MIBADL* (see table 6.1), I prepared the following options for requirement three, which related to the course outcome, “Discuss the theological theme of the Pentateuch as a whole, as well as the themes of its constituent books” (De Jongh, 2006:7), which were presented to the learners as found in Appendix I

Considering the preparation of the specific items in the context of the required intelligence emphasis, I would reflect on each as follows. The **first item**, related to the academic intelligence emphasis, was as follows: “Study for and write a one-hour test that will evaluate an understanding of the theological themes of the Pentateuch as a whole, as well as the themes of its constituent books. The test

will be written on the due date indicated below." (De Jongh, 2006:8). As with the academic items in requirements one and two, the choice to be made was between an assignment and a test, in the context of a decision that I would make use of two assignments and two tests to cover the four academic intelligence emphasis items. As with the choice for requirement two, I was motivated to select a test for this requirement because it was reasonably well suited to the content of this section of the course. In drawing up the test, the main challenge was that of how a content based section could be tested in a manner that would promote deep learning (Bowden & Marton, 1998:8).

The **second item**, related to the creative intelligence emphasis, was presented as follows: "Utilizing an artistic medium (art, music or drama), reflect the theological theme of the Pentateuch. The final submission should be an artwork, musical score and recorded version, or a dramatic script of dimensions and/or length of choice" (De Jongh, 2006:8). It was my intention that the learners would be compelled to be meaningfully familiar with the content of the material; but, that the need to translate the content into an artistic medium would require them to demonstrate a deeper understanding of the material (Marton & Säljö, 1984:44). Allowing learners to use a creative medium would give an opportunity to those who might be stronger in the creative realm to utilize that strength, while still needing to demonstrate an understanding of the core issues in this section of the course, so endeavouring to promote deep learning (Ramsden, 2003:42&47).

The **third item**, related to the practical intelligence emphasis, asked the learners to:

> Write a set of notes for a study guide that will systematically work through the text of the Pentateuch, with the aim of helping the user to discover the theme of the Pentateuch and the themes of its constituent books. The length should be appropriate to the notes, and a bibliography is not required (De Jongh, 2006:8).

In this item, as with the others, the learner would be required to have mastered the content of the material; however, in the development and preparation of the study guide, they would need to be practical and deal with the challenge of preparing

material that was not simply a reproduction of the findings of research (Marton & Säljö, 1984:45). Rather, they would be faced with the challenge of preparing material that would lead others to that same content and understanding (Merrow, 2003:¶12). As such, the learners would need to master the material under consideration properly and then present in a way that would lead others in their own process of discovery and learning.

Finally, the **fourth item**, related to the relational intelligence emphasis, required that the learner should:

> Teach the theme of the Pentateuch and the themes of the constituent books to an individual on a one-on-one basis. While doing so, allow the person to interact with you on the significance of the themes for their own lives. In no less than 600 words reflect on the experience in terms of who the person was, how you carried out the task, how the person responded, and your interaction with them (De Jongh, 2006:7).

Within this intelligence emphasis, the main relational dimension was the learner-others dimension. In this item, as before, learners would need to master the content of the material, then communicate and discuss it with another person (Ramsden, 2003:42). However, the requirement would demand that the learners demonstrate the necessary understanding in a relational and interactive context (Marton & Säljö, 1984:54). As with the similar option in requirement three, the authenticity of this assessment item was arguably higher than in the other items. Furthermore, the presentation of the material in a relational setting would probably demand that the learners internalize the material prior to the actual completion of the assessment item, which could promote a deep learning approach (Nightingale et al, 1996:267).

6.2.1.4 Requirement four – Textual exegesis

Utilizing the *Guide for the Preparation of Assessment Items in MIBADL* (see table 6.1), I prepared the following options for requirement three, which related to the course outcome, “Meaningfully exegete a selected passage or passages from the

Book of Genesis" (De Jongh, 2006:9), which were presented to the learners as found in Appendix K.

Considering the preparation of the specific items in the context of the required intelligence emphasis, I would reflect on each as follows. The **first item**, related to the academic intelligence emphasis, was as follows: "Submit a detailed exegesis (1200-1500 words) of **one** of the passages from Genesis, with the focus on the main human relationship with God. A bibliography of at least four meaningful references is required." (De Jongh, 2006:9). The nature of exegesis is that learners are required to demonstrate an understanding of the meaning of the passage being considered, with the possibility of a particular nuance (Bowden & Marton, 1998:51 and Marton & Säljö, 1984:46). In completion of this assignment, learners would not only have to explain the meaning of the text, but they would also have to focus on the particular aspect of "... the main human relationship with God" (De Jongh, 2006:9). It was my expectation that particularly the second part of the item would contribute to deep learning on the part of those learners who chose this item.

The **second item**, related to the creative intelligence emphasis, was presented as follows:

> Prepare and preach a 20-30 minute sermon, based on one of the passages from Genesis, which focuses on the main human relationship with God. The sermon will be preached to the rest of the class; while a copy of the learner's preparation and notes must be submitted on the day of preaching. Learners choosing this option will be allocated a preaching opportunity by the lecturer (De Jongh, 2006:9).

In this option, the learners would be compelled exegete the chosen passage in a meaningful way (Marton & Säljö, 1984:46), and then communicate it by means of a sermon (Ramsden, 2003:47). Allowing learners this option not only made the assessment item more authentic, it also gave an opportunity to promote a possible deep learning approach, as the learners would be required to work beyond a simple written understanding of the passage chosen (Marton & Säljö, 1984:46).

The **third item**, related to the practical intelligence emphasis, asked the learners to:

> Prepare and lead a 20-30 minute interactive Bible Study, based on one of the passages from Genesis, which focuses on the main human relationship with God. The study will be led with six other learners making up the group, and at a time allocated by the lecturer. Study notes must be provided to the group, while all preparation and study notes must be submitted to the lecturer. (De Jongh, 2006:9).

In this item, as with the others, the learner would be required to have mastered the content of the material; however, in the preparation and leading of the Bible Study, they would need to be practical and deal with the challenge of preparing a study that was more than a reproduction of the findings of research (Svensson in Marton & Säljö, 1984:46). Rather, they would be faced with the challenge of preparing material in a manner that would both communicate and interact with the participants (Marton & Säljö, 1984:46).

Finally, the **fourth item**, related to the relational intelligence emphasis, required that:

> Over three days, meditate for no less than one hour on the three passages from Genesis, and reflect on what each passage teaches about human relationships with God. Over three further days, as a response, exercise the lessons learnt in any concrete and meaningful way. Record your meditations, lessons and responses in a journal of no less than sixteen A5 or eight A4 pages – submit the journal in your own legible handwriting (De Jongh, 2006:9).

Within this intelligence emphasis, the main relational dimension was the learner-self/God dimension. In this item, as before, learners would need to meditate on the chosen passage; this would be a process that, in the Christian understanding, would be an interaction between the learner, themselves and God (Prosser & Trigwell, 1999:3). As with the similar option in requirement three, the authenticity of this assessment item was arguably higher than in the other items. Furthermore, the presentation of the journal would ensure that the learner was intentional in the completion of this option and encouraged to internalize the material through the

process, which had the potential to promote deep learning (Nightingale *et al*, 1996b:267 and Ramsden, 2003:43).

6.2.2 Implementation

Overall, the actual implementation of the research with regard to the course was very similar to how it had been taught in the past. However, there were three areas in which the research demanded difference; namely, introducing the course and the research to the learners, aspects of the teaching of the course, and the use of the questionnaires and interviews with the students. In this section, I will reflect on how these were carried out, as well as make reference to my personal research journal.

6.2.2.1 Introducing the course and research

When it came to introducing the course, the first difference was that I commenced with a pre-emptive oral introduction to the learners that explained that the course would form part of my doctoral research, briefly introduced the research, and explained the main difference in the course. It also gave the opportunity to allow the learners to ask questions, and then to ask their permission to work with their actual names instead of coded references. Having heard this, the learners were again afforded an opportunity to object and then to choose whether they would prefer to complete the course in terms of the historical requirements, being two assignments and a two-hour examination. Finally, I once more afforded them the opportunity to ask any questions, and indicated that, should any concerns arise during the course, they were free to address them to me. As indicated in the copy of the read document below, there were no problems and the acceptance was 100%, numbering twenty learners as previously indicated.

Table 6.2 Research Introduction

RESEARCH INTRODUCTION TO LEARNERS

(Monday 17 July 2006)

Morning learners

As we commence this course in Biblical Studies – BBS 225, The Pentateuch – I would like to advise you that this course will form part of my doctoral research towards a Doctorate in Education.

The focus of my research is the assessment of learning; to be more comprehensive, my research title is *Theories of multiple intelligences and learning assessment for deep learning in Higher education*. Part of my research requires that I apply my thesis in the real life classroom and course environment.

I would like you all to know that the main difference is this course will be in relation to the course requirements, where you will find that you have more options than usual. There will be a total of four course requirements – over and above the usual attendance of lectures. Each of these four requirements will present you with four options, of which you will have to complete one. You will notice that each option is numbered, from 1-4, and you complete only one of these; however, across the four requirements, you will be required to complete options across at least two numbers. I will explain this requirement further in due course.

Are there any questions at this point?

[None were forthcoming]

As it will be necessary for me to ask you to complete questionnaires, have one interview, and submit your requirements,

I would now like to ask your permission to work with your actual names – rather than codes – through the course and my research. For your understanding, I will not be using anyone's name in my actual thesis. This will help me greatly; but, does anyone have an objection to that?

[There were no objections]

If anyone has been hesitant to object, please feel free to speak to me afterwards.

[No-one expressed any objections in any way]

Having heard all that I have said, does anyone object to be being part of this research?

[After adding that learners were free to choose to complete the traditional requirements of the course, no-one expressed any objections in any way]

Any other questions in conclusion?

[None were forthcoming]

Thank you for your kindness. If you have any concerns through the course and semester, please do not hesitate to speak to me about them.

Further to the above, the learners submitted a written consent form that read as follows:

> Having been introduced to the research that Dr Charles de Jongh is carrying out in the BBS 225 course (2nd semester 2006), I hereby give my informed consent for inclusion as a participant in the intended research.
>
> I understand and acknowledge that I have been given the option of objecting to being part of the research, and completing the course in terms of the standard course requirements.

While not doing so formally, I reinforced the intent of both the oral submission and written consent on a number of occasions in the early stages of the course. There was one learner who initially felt that they would rather complete the historical requirements; however, after further dialogue on the nature of the research and the extent of the research requirements, they chose to continue with the research requirements. It should also be noted that one of the learners, who commenced the course, subsequently withdrew because of work pressures, not because of any problem with the course and its requirements.

6.2.2.2 Teaching the course

Regarding the actual teaching of the course, there were no differences in the actual lecture room activity, as compared to previous years. The only addition was that from time-to-time I found it necessary to spend a few minutes either explaining the upcoming course requirement or allaying fears that the learners might have had regarding an upcoming submission. The nature of explanation was generally related to an option that was different to anything that the learners had ever been able to submit; while the allaying of fears was similarly related to concerns that some of the learners had because the option they had chosen was again different to anything previously submitted. However, I found that these times helped the learners and addressed their concerns. On the odd occasion certain learners needed additional one-to-one input; this was generally no different in nature than would be usual in any course that I teach. Perhaps one further aspect to mention was that it was important for me occasionally to encourage the learners in the work that they were doing.

6.2.2.3 Questionnaires and interviews

Specific slots were allocated in the teaching timetable for the submission of the given requirement, immediately followed by the completion of the related questionnaire. I found that this was very effective, because it guaranteed a high immediate return and made the follow-up of absent learners very easy because of the low numbers (generally never more than two or three).

Almost parallel with this, I endeavoured to carry out the related interviews almost immediately after the completion of the questionnaires. Although this was not always possible, it was a general pattern that again made the completion of the interviews significantly easier. Further to this, in relation to the course requirements, it meant that the actual requirement was fresh in the learners' minds when they were interviewed. This assisted in the reduction of memory decay, while the single interview per learner overcame interview saturation meaningfully. However, I would concede that the level of motivation towards the end of the research was lower in the learners as they were feeling the typical pressures of completing the course and the semester. The actual content of the questionnaires and the input from the interviews will be discussed in the next section that examines the learner and researcher input.

6.3 PRESENTATION AND ANALYSIS OF DATA

Working with the input received from the questionnaires, interviews and my research journal, I now present the data and an analysis paralleled to the six occasions data was collected. As such, I will consider these as follows: the initial responses, requirement one, requirement two, requirement three, requirement four, and the final responses. In this section, I will focus on the data as received on each occasion; this will be followed by '6.3.7 Integrated analysis of the data', where I will draw out the key data. While the process of presentation of the data and the associated analysis may be somewhat lengthy, I have chosen to present in this way, as it enables an appreciation of issues that arose, negatively and positively, through the course. Observations in this regard will be noted as they presented themselves through the questionnaires, interviews and journaling.

6.3.1 Initial responses

The learners completed the first questionnaire ten days after the course was introduced to the learners. The reason for this *delay* was that I chose to allow time for the learners to respond to the course information and to make preliminary choices as to the requirement options that they would prefer to complete, without being bound to them for the duration of the course. Consequently, the initial

questionnaire explored the learners' general response to the approach to assessment, as well as giving insights into their specific responses to the assessment items. The first part of the initial questionnaire was autobiographical, with the data already presented in the preceding chapter. My concern in this sub-section is to report the responses of the learners to the course in general and the assessment items specifically.

6.3.1.1 Questionnaire responses

There were four questions in the **initial questionnaire** that related to the actual course and the assessment options (see Appendix D for student responses), with the questionnaire being completed after the learners had submitted a form indicating their provisional choice of assessment options. The first of these questions was used to gauge the students' general feelings regarding the course and asked, *How did you feel when I introduced the BBS 225, The Pentateuch course (mark any options that apply)*' This was followed by a range of responses that were initially listed in the following deliberate groupings:

Generally positive: excited, challenged and positive;
Generally neutral: nothing different and uncertain;
Generally negative: apprehensive, afraid and confused.

These were randomly arranged to limit the influence of an ordering that was *positive to negative* or vice versa. The options were presented in the questionnaire in the following sequence:

confused,
uncertain,
positive,
challenged,
afraid,
nothing different,
apprehensive,

excited,
anything else.

As the learners could mark any options that applied, where more than one was marked, they were scored proportionately. For example, only one option was scored as '1'; if three were marked, each was scored as '⅓' to total one overall. Utilizing this scoring, the responses were as follows:

Generally negative:

Confused	0,3	
Afraid	0,3	
Apprehensive	2,6	
Anything else (anxious)	0,3	*Total: 3,5*

Generally neutral:

Uncertain	2,0	
Nothing different	0,3	*Total: 2,3*

Generally positive:

Positive	5,0	
Challenged	4,2	
Excited	5,1	*Total: 14,3*

The responses indicate that while certain of the learners were generally negative (apprehensive, afraid, confused and anxious), the response was generally positive (excited, challenged and positive). This generally positive response was confirmed in the responses to the following question 13, *If you wish to say anything more about how you felt, please write it here*. Questions 14 and 15 read, *Having had the opportunity to provisionally select your assessment options, describe how you felt about the opportunity to choose from a wider range of options,* and, *Are there any other comments you would like to make at this stage of the course?*

An analysis of the learners' responses to the subsequent items reflected a generally positive attitude; however, certain concerns were expressed (note that in the presentation of the data, I have on occasion corrected grammatical errors to improve understanding). In considering the **positive comments** the five significant responses related to the availability of options and choice, differences between learners, the inclusion of creativity, deep learning, and broader observations. In terms of options and choice, there were a number of learners who highlighted this as their key response. This is perhaps encapsulated in the following comment, "… in discussion with classmates it is so interesting seeing the diversity in what we have chosen to do in our requirements. It gives us the opportunity to be more who we are in the work we have to do. What an opportunity!" This response was reaffirmed by other learners who made comments that expressed excitement at the different options which gave them freedom to express themselves differently, a sense that the options put the course in better perspective, and that they were afforded the opportunity to "… do something different."

Building on an appreciation of choice, a number of learners identified a link between the assessment options and the differences between learners. For example, it was commented that the assessment options "… [give] me peace to know that I have great options where I can choose what best [suits] my learning process." This was particularly related to learners who perhaps were not academically inclined in the traditional sense: "I felt that the new assessment gives an opportunity for those who are not academically inclined…"; and, "I appreciate this, especially for students who do not have the academic background I necessarily have." Further to this, one learner even observed that "… this opportunity allows people who struggle with language and academic disabilities (such as ADD, ADHD and others) to have a medium to excel."

It was noticeable that certain of the learners affirmed the value of the choices because they were given an opportunity to utilize their creative strengths in the assessment items. One learner's observation was that "… at first it is difficult to perceive of education in this manner (esp. tertiary education) but I will enjoying seek[ing] to explain academic principles through artistic mediums." While another

commented that "… the nice thing about being able to work in visual areas where I'm stronger naturally. I had a strong sense of freedom and feel I now have the opportunity to excel." This was affirmed by two other learners, with one adding the comment that they were "… encouraged to see value in my creative side."

Two learners made use of language that suggested that their interpretation was that the options were promoting deep learning, without them necessarily being aware of deep learning. The first student evaluated the options by observing, "I think it is of great value and the more people view education like this, the more they will be able to express there [sic] findings in different mediums *allowing for a greater depth of learning* to a wider variety of people and personality types" (*italics added*). The second learner said, "… it is good in the sense that I have the option to express myself better, or that *I can engage the subject on a deeper level*" (*italics added*). These comments were arguably indicative of deep learning in that they related to a concern for focus and understanding, interpretation of the text, and attention being given to that which is significant (Bowden & Marton, 1998:8&55; Marton & Säljö, 1984:46&49 and Ramsden 2003:42&45) It should be noted that I had at no time referred to the concept of deep learning, which adds to the significance of the comments.

Finally, there were certain broader comments and observations that suggested a possible grasp of the potential future benefits of MIBADL. It was observed that "… on the whole I was excited as it broadens the horizon, gives new opportunity and presents another challenge and way of expression and learning"; while another learner suggested, "I believe it is a step in the right direction and though it will open up a whole new world of interesting dynamics, I believe it holds within it the potential for greater learning and equipping…".

While most of the comments were generally positive, certain **concerns were** expressed, most of which were raised at a personal level and were probably associated with the learners' encounter with the different approach to assessment. Among the concerns were the following responses: "I felt maybe this will create problem for me and later was proven wrong"; and, "I first felt fearful, without looking at the options, of not finding the option I would be comfortable with."

Perhaps the only truly negative comment was made by a learner who "… felt that the work load was not for our benefit, but to see what people like to do" (this learner later expressed his appreciation of the course). Practically, the main concern was that the technical requirements of the non-traditional options were unclear. One learner commented, "I think the other mediums are interesting but will take more effort to use because you cannot always understand the *technical* requirements of it whereas an academic paper you understand the requirements because you have done so many." Other learners said the same in fewer words: "… the technical requirement is not understandable for me", and, "[I] … was not sure how the marking would work." While assessment criteria had been included in the course notes, these comments may have been indicative of the learners' uncertainty based on their unfamiliarity with certain aspects of the assessment items.

Most of the expressed concerns were more general and personal in nature. Some were anxious regarding making a choice, "A bit anxious as I wanted to pick something that I would be able to do well in, not necessarily what I would enjoy doing the most"; "I felt challenged to try a different style of *communication* but at the same time I felt way too apprehensive to try anything too different"; and, "There was a little apprehension because it is a new way of assessment and there is some uncertainty that comes with that." While another expressed what may be described as a frustration, "… if I was gifted in the offered alternative areas I would have jumped at the chance to take such options."

6.3.1.2 Interview responses

Four learners were interviewed following the completion by all learners of the initial questionnaire; these interviews were analyzed by means of content analysis, considering the key content relative to the research aims and questions that emerged. Considering that the response of the various learners differed by virtue of each learner's uniqueness and that the *direction* of the interviews was not always the same, I report on the four interviews separately (note that use is made of the first person plural case, 'they', even when referring to the first person singular, in order to preserve the identity of the only female student). The **first**

interviewee indicated that their initial response, to the new approach to assessment, was somewhat fearful as they did not know what to expect and felt that they might not cope with the assessment requirements and options. However, they indicated that by the time of the interview they understood that the approach to assessment would enhance the course, because the diversity gave them options that gave them a degree of freedom. Based on this, they indicated that they felt they might well do better in the course than would otherwise have been the case, particularly as they felt that some of the options were easier than others.

The **second interviewee** felt very positive about the change, appreciating a different approach to the course and indicating that they were excited about what lay ahead. However, they did also indicate that they were a little anxious about the differences from what they would usually experience, particularly as they were not sure how the submitted items would be marked. Despite a little nervousness, they indicated that they would wait to see how it goes. Speaking more broadly, they reflected to me that they had picked up a good vibe amongst the learners, and that there was a sense of enjoyment related to the course. Following on, the **third interviewee** expressed an initial uncertainty as they were battling to understand the overall demands of the course, but did feel that there was *light at the end of the tunnel*. Regarding the assignments, however, they did say that they felt that the choices were simple and that they were secure in the opportunity to make choices that might enable them to perform better. Overall, they summarized their experience at the time of the interview as *no worse, no better*.

The **fourth interviewee** indicated that they were confused by the extent of options, feeling that the rules had changed, and were a little concerned that they might not make the *right choices* in the requirement options. They were concerned about their ability to meet the requirements, in spite of seeing the options as a refreshing challenge. Referring to the actual options, they did feel that I should have been clearer as to what was actually required in each option. Additionally, they also indicated that the content for certain of the options was not really clear; for example, exactly what material was to be considered for the requirement two test (introductory considerations) in relation to the requirement

three test (theological themes). I agreed with them, and did take subsequent steps to rectify the situation; such as verbally clarifying the content of the requirements on more than one occasion. These four interviews could be summarized as reflecting a combination of anticipation and anxiety amongst the learners.

6.3.1.3 Personal response

Early in my research journal, I wrote that I:

> … had two introduction periods today; went well overall. I felt a little overwhelmed myself, and guess that the learners also felt it. What was most difficult was to assure the learners that what I was presenting was an *extension* to the previous course, not anything radically new.

I was encouraged by the responses in the initial questionnaires and the related interviews. They affirmed what I had felt and recorded earlier, "I have a sense that the learners are going to respond well. Also developing an ever-clearer idea of what I am trying to do." It is also necessary for me to note that in the personal interviews I asked all the learners to feel free to give me feedback at any time. Reflecting on this first stage, I felt very strongly that the learners had responded well, and that I was definitely gaining in my own belief and confidence in what I was doing.

It was encouraging to see that some of the learners were indicating insights into the *deeper* intention and value of MIBADL, this being an affirmation to me at a personal and research level. I was pleased to observe that most of the learners were responding well to the broader approach to assessment, and that they had overcome most of the initial hesitancies to take hold of the opportunity. Finally, I appreciated the critical feedback and input; for example, in the learner who highlighted the need for greater clarity as to the actual content of certain of the requirements and related options. At this stage, it was apparent to me that I should have been even more intentional in assisting the learners with respect to those assessment items that they would not have been familiar with. It seemed

apparent that any concern or reluctance being experienced by the learners was usually associated with their unfamiliarity with the overall approach and with the specific demands of certain of the assessment items.

6.3.2 Requirement one – Background issues

6.3.2.1 Questionnaire responses

In relation to the **learners' choice of options**, the number of learners per option was as follows (see Appendix E for responses):

A written assignment	10
A written story	1
A book chapter	2
A personal journal	7

In response to the question that asked why the learners had chosen the option they had, there were two main groupings of responses. The first responses were those that came from the learners who chose to complete a written assignment; while the second came from those who chose one of the other options (a written story, a book chapter, or a personal journal). Those learners who chose to write an assignment mainly responded that the reason for their choice was that of a familiarity with the writing of assignments; this reason was given by seven out of the ten learners who chose to write an assignment. Comments to this effect included: "… it was more familiar to me…"; "… I am so familiar with [assignments]…"; "… I am used to them…"; and "… I had done assignments before…". One of the learners went further by pointing to their choice for the familiar being linked to a time pressure, "Because of time constraint, I opted for something I knew how to do." In a similar vein, another learner commented that "… I felt I could get more marks with it…". Only two of the learners indicated that their choice was deliberate and intended to enhance their work; one commenting that "… I felt it would be the most beneficial in terms of research and application." Reflecting on these reasons, the first eight learners have reflected that their choice was based on either a surface or strategy approach to learning. By contrast, only

two of the learners have suggested a deep learning approach to their choices, in that they were making their choice based on that which would be of personal benefit (Marton & Säljö, 1984:45 and Ramsden 2003:42).

Considering the other half of the learners (ten out of twenty), the reasons given show significant differences, especially as none of them suggested familiarity as the reason for their choice. The simple reason that these options are not common in higher education may account for this in part; however, the nature of the responses reflects something more than that. The only learner to choose the written story option said, "I want to grow in my creative abilities as a means of ministry." This reason may be indicative of deep learning, in which the learner recognized an opportunity to combine this requirement with a desire to develop in another area of their person and so integrate the actual item with their personal development (Chalmers & Fuller, 1996:7; Marton & Säljö, 1984:44 and Prosser & Trigwell, 1999:3). The two learners who chose the option of a book chapter reflected two relatively different reasons. The choice made by one of the learner was expressed as a micro-step towards a life ambition "… to write a book"; while the other felt that the choice "… fitted more my structural view on the work." As such, both of these learners made an intrinsic choice which had personal significance, one out of a life dream and the other out of their own personality, and these choices may be indicative of deep learning (Marton & Säljö, 1984:54 and Ramsden, 2003:42).

Seven of the ten learners, who did not choose the assignment, chose the personal journal option. While no reason was particularly outstanding, three of the learners indicated that their choice was motivated at a personal level: "… it enables me to be more personal and reflective … I love the journal for a change…"; "Enjoy journaling"; and "… something more experiential … which I see as a strength in myself." One learner reflected that they made the choice because it was challenging, while another unusually indicated that they felt they would get "… better marks for this option." However, it was the remaining learner who reflected a definite desire for deep learning in their choice in their concern for meaning (Biggs, 2003:12) and structure (Ramsden, 2003:42&47). This learner remarked:

> … the option required the grasping of the concept as opposed to right wording and references. It allowed for work to take place during class with some reflecting at home which meant [that the] emphasis was on understanding concepts as opposed to reproducing work from other books.

This learner was probably the only one to state so specifically a reason that is indicative of deep learning. It may indicate that the assessment item did not promote deep learning to the extent which I had anticipated, or it may be that the learners simply did not make use of language that might have suggested a deep learning approach. The actual reason for this is difficult to argue in the specific context of my research.

Commenting on their **experience of the options** chosen, the learners indicated that they had experienced their choice as follows:

Very difficult	0
Difficult	8
Average	8
Easy	4
Very easy	0

Reflecting on the reasons for their experiences, the learners who described their experience as difficult generally reflected on two areas; namely, technical and processing. Technically, those learners who completed the written assignment argued that they had battled to access sufficient data in the available references. In a different vein, a learner who wrote a book chapter pointed out a problem that has already been referred to; namely, that they were not quite sure what the technical demands were, "… there is no layout given how to do it." One of the learners who completed the personal journal felt that they did not always know how to demonstrate the development of their understanding, which was expressed as an aspect required of the option. It was also interesting to note that the same learner observed that "… the temptation to slip back into academic writing is always there."

The rest of the learners found their experience as either average or easy. Most of those who indicated their experience as average seemed to have found some parts easier and others difficult. In terms of difficulties, the complexity of the topic, drawing of conclusions and technical requirements were noted. In terms of ease, the main comments were linked to familiarity with the assignment style or comfort with the option chosen. Those who found their chosen option easy essentially reflected that the option that they had chosen suited them; for example, “I am used to [assignments] and I enjoy doing research”; and “It was a personal reflection, availing me the opportunity of [being] less academic and more practical. I also find it easy to retain what I have written.”

When asked **why they had not chosen one of the other options**, the responses were either negative or positive. The negative reasons were generally those factors that the learners felt were hindrances to the choice of another option; whereas the positive reasons were generally characterized by a willingness to be challenged or to do something different. The main negative reason was technical, as a number of learners indicated that they did not choose a different option because they were unsure of the technical demands and requirements. This was particularly true for a number of learners who chose the written assignment over any of the other options; as one commented, “… [I have] no experience of doing the others.” Further to the technical concerns, were personal concerns illustrated by one learner who commented that “… initially I thought to do the journal because I thought that it was the easiest of the options. But then got scared it was too simple and that I would … probably [have to work] harder to secure a good mark.” The concern regarding marks also had a technical dimension, as certain learners expressed a hesitancy based on the uncertainty regarding the allocation of marks in the non-assignment options. What was very interesting to observe was that the bulk of the negative reasons came from those learners who chose the written assignment, while the majority of the positive reasons came from those who chose one of the other options.

The positive reasons for the choices made, as opposed to other choices, were broadly personal and challenge based. At a personal level, the reasons were very varied; for example, “The other options were dull or too abstract for me”; and “[The

other options are] normal to what we do at college." Both of these reflect a willingness to be extended and to move beyond personal comfort zones. However, I was more encouraged by the reasons that indicated that the learners wanted to be challenged: "[The others] were not as challenging as the one I chose"; "I wanted to do something new"; and "[I] felt the … other options were too typical for college assignments." However, one of the responses was particularly encouraging as a learner commented:

> … in doing assignments, I find the technical language etc is [primary] ... to the concepts and the concepts have more impact on one's thinking. I thought the journal was more concerned with the grasping of the concepts as opposed to referencing etc.

The final question asked was whether the learners would make any **changes to the options**. In response to this question, there were no learners who suggested that they would make any changes; however, some learners included additional comments as to possible improvements. The main improvement suggested was a repetition of something that I had already become aware of and which learners had already raised. This was the need for a better statement of the technical requirements. One learner encapsulated this improvement when they suggested that "… the only thing that I was unsure [of … related] to all the technical requirements as I had never had a journal marked or critiqued and so I would become more comfortable with it as I understood better the finer details that are expected." Overall, the response of the learners was positive in that they appear to have felt that their preference was catered for or that they had an opportunity to explore something new. In a nutshell, the entire response to requirement 1 was presented as positive.

6.3.2.2 Interview responses

Following the submission of requirement one and the completion of the related questionnaire, I interviewed three learners (selected as described in section 5.5.2) to develop and expand what had been fed back in the questionnaires. The **first interviewee** had completed the personal journal, expressing that while they had

enjoyed the experience, they had also found it difficult. Their main difficulties lay in that the option required them not to reproduce what they perceived to be a typically academic understanding of the topic, but also their own ideas and thoughts. A reading of the journal and further conversation with the learner uncovered an interesting aspect of the learners' experience and submission. This particular learner had grown up in a village in the Democratic Republic of Congo where they had spent many childhood days listening to their grandparents tell them stories. As they sat in the lectures and reflected in their journal, they drew an association between their childhood village experiences and the technical academic content of the lectures. This could be argued to have been indicative of deep learning in that the learner came to draw associations between what they were being taught and their broader life experience (Bowden & Marton, 1998:61; Marton & Säljö, 1984:46 and Ramsden, 2003:42&47). Considering of the aims of my research, I concluded that this had only been possible because the learner had been afforded the opportunity to work in an option beyond that of the academic intelligence emphasis, which would have been the sole requirement if I had not applied MIBADL. If they had been required to complete an assignment or write an exam as the assessment requirement, which was often the set requirement, this association might not have occurred and the learner would not have learnt in the way that they did.

The **second interviewee** had completed the book chapter, because they found it challenging and they simply wanted to do it. They indicated that they had wanted to move away from what was usually done, which they often found too easy, and wanted to be stretched by the variety that the options offered. In terms of their concerns, their main concern was how they were expected to write the book chapter, in the light of an absence of deliberate and specific guidelines. In terms of the actual topic, they suggested that a better description of the "… book …" would have been valuable. This learner had appreciated the challenge of a non-traditional option, while feeling that I had left them lacking when it came to technical guidance. It is interesting to note that this learner had expressed grave reservations about the course and approach to assessment in the beginning; however, they already indicated a more positive response in the first requirement.

By the end of the course they had completed further non-academic intelligence emphasis options.

The **third interviewee** had also completed the personal journal, as they had not wanted to write an assignment and had the perception that they did not have the necessary time for the chapter or story. However, their choice was largely motivated by a sense that the completion of the journal would enhance the integration of the related material into their broader knowledge, which is indicative of deep learning (Chalmers & Fuller, 1996:7; Marton & Säljö, 1984:44&53 and Prosser & Trigwell, 1999:3); their comment was that the journal makes the material "… part of me." What was interesting was that, while not required, they had used friends to read their journal as a form of informal peer-assessment. In doing so, they asked them to simply answer the question, 'What do you understand by this?', referring to the content of the journal. In terms of their overall experience of the course to date, they indicated that their experience had been positive, in that they felt the course had been simplified and that they were able to focus on the material section-by-section. At the same time, they did express a concern that if all the College courses were constructed in the same that the overall workload would be excessive.

6.3.2.3 Researcher response

The feedback received from all the learners in the questionnaires and the three learners in interviews was generally positive. Further to this, I noted in my research journal that a third year learner had indicated their *jealousy* at not having been able to complete the BBS 225 course in the terms of the research group. With regard to my assessing role in requirement one, I noted that I "… quickly realized the challenge of [assessing] options 2-4, as they demand that I be more deliberate and considered." The reason for this was the same as that which had been highlighted by a number of learners, that the technical requirements for the non-traditional items were not clear. However, I worked hard to ensure that I was as fair as possible, while becoming aware of a potential threat to the quality of my assessing. That threat was simply the danger of being *overwhelmed* by the final product in particular the creative items, and then awarding a mark that is based on

the surface impression of the assessment item, rather than the total quality of the submission. Having completed the assessment, I commented, “Finished [assessing]. Overall, very encouraged; one or two students did not do very well, a little disappointed. However, I am happy with the group as a whole. I feel that the process is going in the right direction.”

With respect to the actual assessment item submissions a technical analysis of the submitted items was not necessarily indicative of deep learning, as every learner is unique and the assessment item submitted needs to be analyzed relative to the learner. However, this does not prevent a preliminary consideration of whether the items are indeed reflecting deep learning in any way. Considering the essays that were submitted, there were no specific indicators of deep learning (as listed in Table 3.1, Deep and surface approaches to learning). The only possible exception being in the submission of an African learner who related their particular African cultural context and oral tradition to the essay topic, so relating their existing knowledge to their new knowledge (Fry et al, 2003:18; Marton & Säljö, 1984:44&46 and Ramsden, 2003:42&47). In this, they were drawing on their wider experience and were able to relate their existing experience and knowledge to that which they were learning in this particular course.

With respect to the second option, the story, the submission was made by a learner who is creative. This creativity was apparent in the story that was submitted; however, whether the story and its quality were specifically indicative of deep learning is again difficult to determine. Certainly, the challenge of communicating that which was being learnt in lectures into a fictional story was exceptional, and the ability to do so well may either have been an indication of above average creativity or of a deep learning approach (Bowden & Marton, 1998:55 and Merrow, 2003:¶12). In this particular case, I would suggest that it may well have been both, because the creativity alone could not guarantee that the necessary understanding was demonstrated. By contrast the practical item was completed by two learners; the submissions were reasonable, but there were no clear or possible indicators of deep learning.

The final item, the journal, was chosen by seven learners and the quality of submissions varied. The submissions were reasonable and there were limited indicators of a deep learning approach. As with the essay, the only possible indicator of deep learning was an African learner who related their experiences of growing up in an African village to the material that was being addressed in the related section of the course. In this, the learner was able to relate their pre-existing experience and knowledge to the specific material of the course, which may have been indicative of deep learning (Fry et al, 2003:18; Marton & Säljö, 1984:44&46 and Ramsden, 2003:42&47).

In summary, while the assessment submissions reflected a standard spread of marks, there was no evidence to support explicitly the suggestion that a deep learning approach was promoted by the assessment options, there were only reasonable indicators that deep learning may have taken place.

6.3.3 Requirement two – Introductory considerations

6.3.3.1 Questionnaire responses

In relation to the **learners' response to the options**, the number of learners per option was as follows (see Appendix H for responses):

A one-hour test	10
A book chapter	3
A poster	6
A Bible Study	1

In response to the question, *Why did you choose the option that you completed?*, the learners' responses reflected a similar patter to the first requirement. By this I mean that the responses were almost automatically grouped into those who chose to complete the academic one-hour test (ten out of twenty) and those who chose the other options (the book chapter, the poster and the Bible Study). Those who chose the academic option tended to reflect strategy learning characteristics, with some reflecting surface learning; while those choosing the others were more

inclined to deep learning characteristics. The following responses from those who chose the one-hour test illustrates the strategy learning response related to time demands: "Honestly, it required the shorter amount of prep time"; "Because I had 3 assignments due and a test takes less time to prepare for…"; and, "… the time spent studying is far less than writing a normal assignment." Other strategy responses tended towards the choice being made because it was viewed as the one in which the highest marks would be obtained: "Felt that it would be the requirement I would do the best out of the options"; "I feel more comfortable with the test…"; and, "… I thought it would be easy for me…".

In relation to the remaining three options, the responses were more indicative of at least a tendency towards deep learning, particularly from the six who chose the poster option. Here comments (italics added in all quotes) included: "It gave me the opportunity *to explore* a more creative way of doing my assignment"; and "… I could use some of the *creative talents* I have … a refreshing change." It was also interesting to note that these learners were also starting to talk about their talents; indirectly, pointers to Gardner's intelligences and Sternberg's abilities. While there were hints of this in the requirement one questionnaires, it appeared to be starting to come through more deliberately in these responses. The general tendency was also found in the learner who completed the Bible Study, commenting that "… my ability to write tests … took me to something different." In other words, this learner was prepared to experiment in another area, even though they felt that they had the ability to write tests. Together with an earlier comment, this was a hint that certain learners were beginning to move towards a willingness to step out of their comfort zone, into something that would grow them beyond the course and its content. This was important, as it was a development that I had not really anticipated or expected. The only real strategy response came from a learner who had submitted the book chapter, saying that "… for me it was the one which I was familiar to, I was not prepared for the others." All-in-all, these responses followed a similar pattern to that of the first requirement, with the added emergence of a fledgling *self-enrichment* dimension, the desire to *explore* or *try* something new.

Commenting on their **experience of the options** chosen, the learners indicated that they had experienced their choice as follows:

Very difficult	1
Difficult	6
Average	10
Easy	2
Very easy	1

When asked to explain why they had experienced their chosen option in the way that they did, as with the first requirement, the learners who had found their chosen option difficult or very difficult seemed to suggest that there were technical reasons for their experience. For example, the learner who described their experience as very difficult had completed the Bible Study, commenting that it was very difficult, because "… I always used other people's [Bible Studies] and this is my first." This suggested to me a technical challenge, together with the response that is often typical of a first time endeavour. Referring to the one-hour test, one learner commented that they "… did not always understand the argument of the authorship of the Pentateuch or why they were important…". While another simply suggested that they were "… not strong at exams [tests]," again suggesting a technical challenge more than anything else. However, this did raise the issue of assessment in a form that does not suit the learner. Associated with this is the challenge that MIBADL seeks to address, that learners should be given various options of assessment and be allowed to choose the one that best suits them. In relation to the poster, three different responses were given as to why the learners had experienced the option as difficult: firstly, "I didn't have the computer programme and needed to work at a friend's house…"; secondly, "Because the option is relatively new, it was difficult to keep the technical demands in mind"; and finally, "I'm not an artist." This brought two important aspects to the fore for me. The first was the technical challenges that are present in at least certain creative and practical options. The second was, that as a result of the first, it was possible for learners to fail to meet the required minimum standard and/or pass a creative or practical option. In one of the interviews held later, a learner expressed a concern that it seemed to them that it was not possible to fail a non-academic option.

Considering the learners that found their chosen option to be *average*, those who wrote the test (five out of ten who wrote) all agreed that with due diligence in preparation and study, the test was very fair. Comments included, "… if one had studied one's work there would be no problem in answering any of the questions…"; and, "It was a good test but I did not find it difficult as I had studied my course material." One learner did comment that the test was fair, but that they had not prepared adequately. All the learners who submitted the book chapter (three in total) commented that they had an average experience. Generally, this was linked to the chapter's not being too different to an assignment, although they did comment that this did not make the option easy. Those completing the poster basically reported that the option had not been too difficult or too hard: "I am experienced in this kind of task so it makes it easier, however creative expression is always a challenge"; while the other commented that "… it was not more difficult than a traditional assignment nor more easier. I was actually motivated to put in a lot of effort as I had the freedom of being creative." Amongst these learners, I detected a sense of appreciation for the option to be creative – something that had already surfaced in requirement one.

Only two learners commented that they had found their chose option easy. One of these wrote the test and commented that they had found the test easy, because they "… studied like a trooper." The other easy response came from a learner that submitted a poster and commented, "I enjoy doing computer design and basic graphics. Finding some of the info and summarizing it was a little difficult." Through these various explanations I found it apparent that there was a general appreciation for the choice from the options; however, this did not mean that the work was automatically easy.

When asked **why they had not chosen one of the other options**, I found that the learners again tended to give answers that were indicative of surface, strategy or deep learning. However, it was once again interesting to note that most of the deep learning indications came from learners who had chosen one of the non-academic options, and more so the creative and practical options. When it came to the learners who tended towards the surface learning approach, the main observation was that they had not chosen another option because of *ease*. This

was reflected in phrases such as: "… was easier…", "… at ease…", and, "… easy." This suggested to me that these learners were more concerned about whether they would find the option easy, as opposed to whether they would benefit or be enriched by the option chosen. When it came to the strategy tendencies, many of the learners spoke of having made their choice because of *time*; for example, "… less time…", "Time, time…", and "… less … time-consuming." Another aspect was that of *performance*, with one learner commenting that "… I felt this was the best option for me to excel." In contrast to this, but still linked to performance, was another learner whose comment was that they chose the test because they had not done well in the first requirement; as such, I realized that they chose their option based on the desire to perform better.

Those learners who suggested a deep learning approach made comments that included something as simple as "Variety," through to "I was interested to try something different…"; and, "This option rally stuck out for me immediately. I thought that it would give me different challenges." It was interesting to observe that it was generally the learners working outside of the traditional academic option that were reflecting a possible inclination towards deep learning. This was enhanced for me, in that none of them would have been familiar with the different approaches to learning, as none of them had backgrounds in education and I had not introduced the concepts to them. At this stage of my research I was considering whether MIBADL opens up deep learning simply by its use and the presence of the options presented to the learners.

In terms of whether they would make any **changes to the options**, the overall response was that the learners felt that major changes were not necessary. Two of the learners who made additional comments said that "… it all seems fair enough options…", and, "There is an option for most fields of thought." In terms of constructive criticism, the theme that had already come to the fore was repeated; namely that of technical guidelines. While no learner suggested changes to the options, three learners suggested that more significant technical guidelines would be of value: "The question was not clear enough…"; "More stringent guidelines on what was needed"; and, "An example of what you are looking for would be helpful." These responses were a clear indication to me that the learners

appreciated the options in general; but that, specifically, there was a feeling that they needed more specific guidelines for the non-traditional items. This became more apparent to me as I realised that there was a very clear guide for assignment writing (the College's *Assignment Writing Guide*) and that the learners had certainly written tests. However, none of this prepared them adequately for the demands of the other options; in this requirement the writing of a book chapter, a poster and a Bible Study.

6.3.3.2 Interview responses

Following the submission of requirement two and completion of the related questionnaire, I interviewed three learners to develop and expand what had been fed back in the questionnaires. The **first interviewee** had completed the poster option, because they had a media background and felt that the option was suited to that background. As such, they had completed what they saw to be the best form of expression for them personally, while also noting that they did not enjoy essays and tests. Overall, their reflection was that, on the one hand, they had appreciated the option; however, on the other hand, they reflected a sense of frustration. This frustration was a reflection on the problem that I had become aware of; namely, the lack of developed guidelines, such as those already established for essay and examination or test options. They explained that while they had grown used to what was required for essays, especially as all higher education institutions produce a guide for written work that expresses the institutional expectation (even if the quality varies), there was no equivalence for the poster they had submitted. As such, they were frustrated by their uncertainty as to what was expected of the poster. This again highlighted an important practical consideration for MIBADL, the need to establish clear practical and technical guidelines for all options presented to learners. However, all things considered, this learner described the approach to assessment as worthwhile and more appealing.

The **second interviewee** had completed the book chapter option, focusing on the book of Genesis. They had very little to say about their experience, and were not particularly forthcoming; except to comment that they had failed to visually

illustrate their chapter, because of a misunderstanding of the option statement. Speaking about the overall approach to assessment, they were much more open and quite freely reflected on how they felt. They commented that they were enjoying the challenge of something different, and that the options had given them a sense of freedom. However, they did point out that they had not felt able to select certain options, either because of a lack of skills or because of the potential cost of a given option. Reflecting on the perceived lack of skills, I concluded that it would always be a challenge, but not necessarily a problem to the extent that it could be used to justify the exclusion of certain options. It was also probable that the learner too easily assumed that the poster option demanded computer skills, having indicated that they were unable to work in Power Point. I did become aware of the need to emphasize to learners that this need not be the case; for example, two learners had received the equal highest mark for the poster option; one had presented a high quality computer generated poster, while the other had submitted a poster that might be described as a *cut paste* poster. Regarding the question of cost, I was aware that it could be a problem; however, in this particular course there were no set textbooks that had to be purchased, and it could be argued that the cost of producing a poster could be offset against this.

The **third interviewee** had completed the one-hour test, chosen because they felt that it would take up less time; suggesting that they may have decided otherwise if they were not under the time and general pressure. Addressing the overall approach to assessment, the learner indicated that they felt that the approach was accommodating to all learners. As such, it was their understanding that availability of options was beneficial to *non-academics*; even though this specific learner was quite comfortable with the academic approach, and had performed well academically up to the point of the interview. As had already been stated by other learners in their questionnaires and interviews, this learner again raised the need to have more clarity on what was required from the unfamiliar options. Overall, all the interviews reiterated the demand for clearer technical guidelines for the unfamiliar assessment options.

6.3.3.3 Researcher response

Having reflected on the learner questionnaire responses and having interviewed three learners, my impression was that the learners were generally positive about the overall approach; with the main criticism being the lack of developed guidelines for unfamiliar assessment options. At this time I observed that it was "… interesting to note how some learners thought that others were crazy to write the test." This indicated that some of the learners were making value judgements on the options, perhaps beginning to appreciate that they now had choices with consequences. At a practical level, I noted, during the assessing of the tests, a concern that the learners who wrote the test would be unfairly advantaged. The ground for my concern was that the content-orientated nature of the test would automatically result in higher marks. After assessing the tests there were a few higher marks, although these were averaged out overall. My own evaluation of the test that I had set was that at least one-quarter should have been made up of less objective questions that would require a similar demand for insights that the other options had required (Marton & Säljö, 1984:46 and Ramsden, 2003:47). In the test, I had inadvertently promoted a surface rather than deep learning approach.

The second option, the book chapter for children, was generally poorly completed, with all the learners simply tending to present what they would have submitted in an assignment, the only significant difference being that they changed the format to read as a chapter. In other words, these learners had not actually submitted a creative intelligence emphasis item, but an academic intelligence emphasis item in another guise. Consequently, this assessment option failed to achieve its intended outcome. With respect to the third option, the poster, about half of the learners repeated the error of those who had submitted the book chapter; however, others showed a far greater understanding of the demands of presenting the same essential data in a different medium. The first half of the learners tended to submit posters that did little more than composite written text with selected pictures; this resulted in posters that were in reality no more than an illustrated assignment, and they may have done better had they chosen the book chapter option. The other learners, however, worked to integrate the relevant data into the demands and nature of the poster format, with the resultant submission being

indicative of deep learning in that they had been compelled to understand the data in such a manner as to enable its reshaping into the poster format (Marton & Säljö, 1984:54 and Ramsden, 2003:43&47).

The one learner who completed the Bible Study option submitted both the materials that they had prepared, and a personal reflection on the experience. Generally, the work submitted was of a reasonably high standard; however, that alone was not a sufficient indicator of a deep learning approach (Marton & Säljö, 1984:45-46). While there were possible indicators that the learner may have adopted a deep learning approach, such a conclusion cannot be drawn with certainty. Overall, it appeared that the poster was most likely to promote a deep learning approach; however, not in and of itself.

6.3.4 Requirement three – Theological themes

6.3.4.1 Questionnaire responses

In relation to the **learners' response to the options**, the number of learners per option was as follows (see Appendix J for responses):

A one-hour test	7
An artistic medium	8
Study guide notes	2
One-on-one interaction	2

In response to the question, *Why did you choose the option that you completed?*, the learners' responses were similar across the one-hour test and the study guide notes, probably because of a broad academic nature; while the responses from those who chose the artistic medium were also similar, but different. The two learners who completed the one-on-one interaction had unique reasons for their choices. The reasons given by the learners who completed the academic one-hour test option was by now beginning to confirm a pattern to me. The overwhelming responses were related to time and ease and were indicative of surface learning. Regarding time, comments such as the following were listed:

"… it would take less time to prepare for this option…"; and, "… it will save time … [in contrast to writing an] assignment." Related to ease, it was said that, "… I thought it would be easy"; and, "I thought it would be less work…". Two learners did point to different reasons, with one feeling that the others were not viable and the other suggesting that the technical demands of the other options were too great. With regard to those who completed the study guide notes, these were the comments: "It could give me time to study more"; and, "… this is what I like and enjoy." An emerging response was that when the learners chose the academic option, they were often driven by a surface or strategy learning motive. Interestingly, a learner who had written the test in the previous option said, having chosen the creative artistic medium option this time, "I knew it would be a challenge for several reasons, so I opted to not do the *easiest* option this time." This was also indicative of a pattern that was emerging from certain learners, that they were taking both control of and responsibility for the choices they were making, being aware of the consequences and nature of their choices.

Half of the learners who completed the artistic medium submitted a painting (four out of eight); the remaining four variously submitted a computer-generated image, a computer-based presentation, a drama and a song. Of these eight learners, three referred to creativity: "… a more creative assignment…"; "… being creative…"; and, "… to be creative." The other two referred to an ability or gift: "… use an old gift…"; and, "… allows me to use some of my artistic abilities instead of the normal academic approach." Being in a Christian theological college, it was significant to receive the following comment: "Felt that God wanted me to do this assignment to rely on Him and use an old gift that I have not used in quite a while." This learner went on to comment on their experience as one in which "… I was nervous to paint again but I trusted God had given me the picture and so I enjoyed the experience." Amongst the learners who used other artistic mediums there appeared to be a willingness to choose something different: "Doing something new was challenging to me"; and, "To try something new." Once again I observed in this group of learners and responses a different attitude to the chosen option, suggesting a possible deep learning response to the assignment option in that it had personal meaning or significance (Ramsden, 2003:43).

The final option, the one-on-one interaction, presented two different and interesting responses. The first learner simply had to deal with a crisis: "I did the artistic medium and had paint spill on it and had to redo the requirement on Saturday for I had no time to redo the painting." The second learner commented that "… the other options looked a bit harder for one. The fourth option looked straight forward and encouraged me to develop my teaching skills." In a subsequent casual conversation with this learner, I discovered something even deeper had happened. In the learner's reflection, they concluded saying:

> [My friend] and I wrestled with really difficult questions that affected both of our lives. We discovered the themes of the Pentateuch together, which I feel brought our friendship even closer. Although [he] ended the exercise very abruptly, he later admitted to me that this exercise has caused him to ask many questions about his life and his relationship with God.

Although this response was not typical of the learner submissions, it suggested that MIBADL may have the potential to introduce a new dimension to the learning experience of the learners. In this requirement option, a learner had not only completed the requirement, they had encountered another dimension of learning that would not have happened had they completed a research assignment or written a test.

Commenting on their **experience of the options** chosen, the learners indicated that they had experienced their choice as follows:

Very difficult	1
Difficult	8
Average	7
Easy	3
Very easy	0

Reflecting on their experiences, the learners who wrote the one-hour test seemed to fall rather simply into two groups; those who found it difficult and those who commented that it was average to easy. For two of the learners who found the

test difficult, the reason was simply a lack of proper preparation; while the other two commented on not being strong in exams (tests) and being unprepared for the questions asked. This was reflected by one learner who experienced the test as average and commented that they were "… not sure of the sort of [depth] that is required." Another commented that the test demanded "… a lot of reading and memorizing." One learner found the test easy, saying that "… it affords me the opportunity to choose the clear option that give[s] me understanding of the course."

Four of the learners who completed the artistic medium found it difficult; highlighting that, although they appreciated the opportunity to work in an artistic medium, it did not mean that it was an easy choice. However, as one of the learners said, "I really enjoyed it. I think it was just such a great way of completing an assignment." The learner who experienced this option as average, remarked that "… to produce something creative is always a challenge and to think of a concept and way of expressing it can be difficult. Also, I have not sufficiently painted for a while so I needed to get some skills back." Almost by contrast, two learners found the option easy: "Because I came with a concept for my artwork quite easily and enjoyed expressing it"; and, "I had an idea and was able to work with it easily." With regard to the remaining options – the study guide notes and the one-on-one interaction – three learners found their experience to be average, with one finding their choice very difficult. Across these learners, the key challenges were time and technical.

When asked **why they had not chosen one of the other options**, the learners who chose the academic option repeated all the reasons that had been presented in the requirement one and two questionnaires. These were typified in the following phrases: " I did not feel it possible…"; "… [the others] looked as requiring a lot of work"; and, "… time…". Only one learner suggested a deliberate choice, though not a strength, "I still felt this would be my strongest option [despite not being strong in tests]." The learners who chose the study guide notes both proposed familiarity as their main reason; while one of the learners who chose the one-on-one interaction showed a very deliberate process, "I'm not artistic to do option 2. *Option one is too safe. I wanted to try something new*. Option 3 was a

consideration, but option 4 was a little more appealing." (*italics added*). This response was certainly encouraging to me, as it once again showed how certain learners were prepared to step out of their comfort zones, and explore something new.

The learners who chose the creative artistic medium once again showed a generally different attitude to the overall response of the other learners. This was seen in certain phrases: "… felt more inclined…"; "… option appealed…"; and, "… chose to do something new." Two of the learners reflected different and deliberate responses, each of them having their own unique sense. The first of these learners said, "I just wanted to paint so bad that I did not even consider the other option[s]." What I found encouraging about this was that this learner had been given the opportunity to produce work in a form that they had never done before. The second learner reflected on something equally deep: "I was going to do the test but when I was in class God inspired me with the picture so I was certain about doing this one and thus I didn't think of doing the others." Again, considering the context of a Christian theological college, I found this encouraging, as it introduced Christian spirituality to the work that this learner was completing.

As with both of the previous requirement questionnaires, in terms of whether they would make any **changes to the options**, most of the learners said that they would not make any changes to the options. However, one learner did suggest that an option requiring the learner to teach would be good, my immediate response was whether they had misunderstood the personal one-on-one interaction option. Another proposed that the test be changed; however, this might have been because they did not understand that there was meant to be an academic option. In spite of these comments, one learner clearly said that "… I feel there were adequate options to cater for different abilities." At this point, I began to wonder whether the learners were not themselves beginning to reflect Sternberg's triarchic theory of human intelligence. In terms of criticism, the question of technical explanation was raised: "… possibly a more detailed outline of what is expected." Another concern that was repeated was that of cost, with one learner saying, "… I would ask the lecturer to somehow consider that some of the options may be a bit costly to complete than others." In the light of this, one

positively suggested that where a submission was computer-based, “If done on computer hand in on a disk or flash disk as R100 to print is quite a bit.”

6.3.4.2 Interview responses

Following the submission of requirement three and completion of the related questionnaire, I interviewed three learners to develop and expand what had been fed back in the questionnaires. The **first interviewee** had completed the one-hour test, because none of the other options had appealed to them and they had a perception that the test was an easier option demanding less time. When I followed up on the time comment, they did indicate that they would still have chosen the test, even if there were not a time pressure. Commenting on the test, they observed that there was nothing tricky in the test, and that it was straightforward. Speaking more generally, the learner felt that there was a good motive behind the approach to assessment; however, they did indicate that they felt that the non-academic options were *impossible* to fail and almost a *cop out*. In response, I advised them that a number of learners had already come very close to failing in such options; this surprised them and seemed to satisfy their concern. This made me aware of the need to communicate that the options were all equally demanding and that it was possible to fail non-academic options.

By contrast, the **second interviewee** had completed the artistic medium, submitting a painting, expressing that they had enjoyed the opportunity to be creative. This was particularly significant to them as they felt that the creativity matched their *thought processing*, and that it was a medium that they wished to develop and use in their future ministry. From this specific foundation, they felt that the overall approach was opening up a way of learning that would cater for different personalities, giftings and the like. Their own observation was that this approach to assessment and the related variety would result in better learning. A further significant observation by the learner was that they felt that trust was a key aspect of the use of this alternate approach to assessment. It was apparent that this learner, and possibly others, had only been willing to consider the non-academic options because they trusted me.

The **third interviewee** had also completed the artistic medium, saying that the option had attracted them as someone who had studied art at school and enjoyed the opportunity to be creative. They reflected that they had found the completion of their artwork a challenge, but had liked doing things differently. With the previous interviewee having raised the question of trust, I asked this learner whether they had felt the need for trust. In their experience, the reply was that they did not feel so; however, they never developed their reasons and the interview moved on to their overall impressions. The learner indicated that they appreciated the approach; especially in that there was the opportunity to attain marks in different ways. In fact, they had deliberately chosen to complete one of each of the option numbers; while not knowing the grounds on which the numbering was allocated, they had themselves developed a sense of difference. They also commented that they appreciated that the approach was "... beyond tradition...." Their final comment was a concern, "How will it [their artwork] be marked?" In response to this question, I admitted that I was very aware of the challenge and committed to fairness in assessment.

6.3.4.3 Researcher response

In my research journal, I only commented on the question of the marks attained in this test, in light of the higher marks attained in the requirement 2 test. My observation was as follows: "Marked the req. 3 tests and found quite a swing in the marks, which really *balances* against the generally higher marks of the req. 2 tests." Reflecting on this difference, I considered the main reason to be the nature of the material that was studied for each of the tests. Requirement two had required learners to master broad and general concepts and information; whereas requirement three demanded more detail of the learners. Almost by implication, this meant that the marks in the two tests would *balance out* the marks attained by the learners who may have completed both tests. Further to these reflections on the tests, I would highlight the assessment of one of the creative artistic medium paintings. The requirement demanded that the learner reflect the three main elements of the theme of the Pentateuch (Genesis to Deuteronomy in the Christian Bible), which was the patriarchal promise; these being relationship, land and descendants. My concern had been my ability to mark art and creative work,

and whether I would be able to be fair *between* artworks themselves and other options more generally. When I marked a particular learner's painting, I could readily see how he had depicted the aspects of land and descendants; but I could not see the aspect of relationship in any way. As a result of this, I marked the learner down, on the basis that they had not depicted the relationship element. When the learner received their mark, they were disappointed and asked why they had received a lower mark. After explaining my reasoning, they *confessed* that they had not known how to include the relationship element, and had hoped that I would not notice that they had left it out. This experience taught me two key lessons; firstly, that I could mark non-academic items, if I did so with due diligence and a willingness to ask for help if necessary. Secondly, I realized that lecturers would not automatically have to be unduly concerned with the inclusion of non-academic items.

While I have already commented on the academic and creative options, the following comments also apply. With respect to the test, the overall marks achieved by the learners were somewhat low. The exact reasons for this were unclear; however, following the test results for requirement two, I did endeavour to ensure that this test demanded more interaction with the content of the section (the only occasion I had in the research to make adjustments, as the actual test was only drawn up prior to its writing). The learner results may be indicative of that response, together with the possibility that at least certain of the learners adopted a surface learning approach. In relation to the second option, creative, I felt that it would have been appropriate to require each learner to submit not only the artistic medium, but also a brief explanation of how the medium related to the relevant content. That would probably have enhanced the quality of the assessment option and meaningfully contributed to appropriate mark allocation.

With respect to the third option, practical, the two submissions received were somewhat weak, with one being below average and the other failing. With respect to the below average submission, the most significant weakness was that the learner had not properly translated the content into the form of a study guide. As had previously occurred, the learner had done little more than present the material in a different format, without actually responding to the challenges of format and

presentation. The second learner failed because they had neither presented study notes nor addressed the stipulated material. The final option, relational, was completed by two learners in contrasting ways; however, both endeavoured to complete the option as required. Reflecting on all four assessment options, there were few specific indicators of deep learning, except the extent to which certain learners had responded to the requirement to manipulate the content into the form required by their chosen option (Bowden & Marton, 1998:51 and Ramsden, 2003:60). To the extent to which they completed this well, it may be argued that they showed signs of a deep learning approach.

6.3.5 Requirement four – Textual exegesis

6.3.5.1 Questionnaire responses

In relation to the **learners' response to the options**, the number of learners per option was as follows (see Appendix K for responses):

A detailed exegesis	7
A sermon	4
A Bible Study	1
A personal meditation	7

Responding to the question, *Why did you choose the option that you completed?*, those learners who completed the detailed exegesis generally indicated that it was because they were comfortable with the option. This was reflected in phrases such as: "… do something familiar…"; "… the best for me…"; and, "… I understand it." The similar responses tended towards a choice because of familiarity. One learner indicated that they had not intended to make this submission, but for practical reasons had no choice, "I first chose the sermon but ran out of time. The exegesis was my second choice." Similar sentiments were reflected by one of the learners who chose the sermon: "… felt comfortable with preaching," although this specific learner also went on to say, "Also love to know your comment/evaluation of how I preach." The other three learners, who chose the sermon, all reflected a desire for personal development: "I chose the option

just for the experience of preaching a *formal* sermon and develop my preaching"; "To enhance my preaching skill…"; and, "Half of it was that it was a challenge and a learning process."

The single learner who completed the Bible Study, simply commented that "… the story did help me revisit what I think of God's dealings with mankind." Of the seven learners who completed the personal meditation, five indicated what may be described as self-motivated reasons: "It appealed most to me…"; "… it was a challenge…"; "… something I enjoy…"; "… more reflective … allowed for personal interpretation"; and, "I enjoy meditating…". The other two were a probably motivated by strategic reasons: "It seemed like the least amount of research…"; and, "… I could do this one better than the other choices." By that stage of the semester it seemed apparent that more learners were making their choices because they were nearing the end of the course and the semester, and were feeling the pressure of their studies as the semester was reaching an end. It was noticeable that there were not the more developed reasons for the choices, with some expressing a sense of relief that the course requirements had now been submitted. This was also reflected in that some of the learners were very brief in the completion of their questionnaires, perhaps experiencing respondent fatigue.

Commenting on their **experience of the options** chosen, the learners indicated that they had experienced their choice as follows:

Very difficult	0
Difficult	4
Average	13
Easy	2
Very easy	0

Reflecting on their experiences, six of the seven learners who completed the detailed exegesis expressed their experience as average. The main reason given was that it was easy or familiar; for example: "I am use[d] to assignments…"; "I enjoyed this option…"; and, "The test was easy…". The remaining learner said that they had found the exegesis difficult, saying that "… the requirements were

tricky for me. Or maybe I missed what you [the lecturer] required." The experiences of the sermon varied, with one learner finding it difficult, "Preaching is still a new(ish) thing to me. Doing technical exegesis is reasonably easy, yet structuring it in a sermon w[ith] practical application is a little more challenging." The learner that found it average said that "… I say that I experienced it OK, not too difficult. I'd say the best way to describe my experience as challenging. Researching it, putting it together and presenting it since I don't have preaching experience." Of the remaining two learners who found the sermon easy, one commented that "… I am convinced that my personal and primary purpose is to communicate God's truth to his people. I have always loved preaching."

The one learner who did the Bible Study found it difficult: "It required thinking and doing proper exegesis." All but one of the seven learners who submitted the personal meditation experienced it as average. The reasons varied and included: "Some passages I struggled to come to grips with"; "… it wasn't easy … but provided something different to do"; and, "I really enjoy engaging with the Word and seeking what the Lord will say to me…". The one learner who found the meditation difficult indicated that they "… did not really know if I was going deep enough." All-in-all, there were some deep learning pointers; but the majority of the reasons were what may be described as functional and strategic, this probably motivated by the time of the semester and the demands of the end of the College year.

When asked **why they had not chosen one of the other options**, about half of the learners gave reasons that may be described as personal, experienced in a variety of ways. Some of these were negative; for example, one of the learners said that "… the other options looked interesting, but I didn't want to chance them on my last requirement." However, most of these reasons were positive, in that the learners had a deliberate reason for the choice they had made; for example: "I felt more comfortable with the option chosen"; "I wanted to preach"; and, "They did not appeal to my thinking and what I think I would naturally retain as information when doing this work." Other learners referred to certain technical reasons, such as, "I didn't choose the others because I could not know how to do them in a technical way"; and, "All [the others] seemed so formal and would require a lot of

prep." One of the learners made their choice because they wanted the challenge, "I did not choose one of the others because I often do them in my life, I wanted another kind of exercise I also enjoy." A final reason given related to a learner's approach to their own planning, "I thought of choosing the sermon but was not sure [on] what day I would've been allocated and looking at my timetable for the semester though[t] it best to do exegesis."

In terms of whether they would make any **changes to the options**, overall there were no *problems* with the options; however, three of the learners did make suggestions that could improve the options. Regarding the sermon, one learner said, "Maybe suggests the student are allowed to choose the preaching passage within Genesis themselves." In relation to the Bible Study, it was suggested that I should "… allocate 45 minutes to this Bible Study. Also number of Bible Study participants to be at least 9 [there were six, including the learner and lecturer]." Of the personal meditation it was pointed out that the "… number of pages if typed on computer should be less because of the format." One learner made a further comment that arose out of an error I had made in the course notes, where I did not correctly indicate one of the passages from Genesis: "Making sure all 3 passages are correct. It was frustrating to have started Gen. 21:8-21 and later find out it was not meant to be that passage." These improvements, and the frustration, were all valid comments.

6.3.5.2 Interview responses

Following the submission of requirement four and completion of the related questionnaire, I interviewed three learners to develop and expand what had been fed back in the questionnaires. The **first interviewee** had completed a sermon which they had chosen "… for the experience…", and had experienced it as average. In my interview with them they did not have much to say about the sermon experience, rather wanting to interact around the broader approach to assessment. This learner felt that the overall approach was a worthwhile exercise, especially as "… not everyone has the skills to write 2000 word essays." However, they also raised three concerns. The first of these was that the potential cost of certain options, which were perceived to be prohibitive for certain learners.

When I asked whether they felt that such options should be left out for this reason, the answer was negative. The second concern was that I had not paid enough attention to the concerns of certain learners regarding the allocation of marks. This was in the context of the large number of unfamiliar assessment options that were made available, where consequently the learners were unsure of the method of mark allocation. This linked to the third concern that the inclusion of some kind of rubric would be valuable for assessment; however, I personally regarded the assessment criteria as a basic assessment rubric. A final aspect of this interview was that this was the learner who had tested my ability to mark artwork in requirement three. We interacted on this and they admitted that they had banked on my lack of skill in art, reflecting that they had not expected me to make the observation that I did.

The **second interviewee** had completed the detailed exegesis, which they had chosen because they no longer wanted to explore and be challenged. They indicated that they had done this in the preceding requirements, and deliberately chose to be conservative in the requirement four selection. Beyond this, the learner was not really forthcoming, and considering the late stage of the semester, I felt that it would be inappropriate to place unnecessary pressure on the learner. I had the same experience with the **third interviewee** who had completed the personal meditation, because it demanded the least amount of traditional research. Whereas the second interviewee went with something familiar to finish with, this learner indicated to me that they went with the personally least demanding option. Overall, they had appreciated the opportunity to choose from the various options, highlighting the creative options in particular. For them, the assessment uncertainty raised by the first interviewee was not a concern. Their final observation related to the submission of computer-based work, where they suggested that the learners should be permitted to submit work on disk or flash disk, together with a black-and-white copy on A4 paper.

6.4.5.3 Researcher response

By the time requirement four had been completed, together with the questionnaires and interviews, I was experiencing some of the fatigue that the

learners were experiencing. With the pressures of the end of the semester (I was teaching a total of seven courses in the semester), I felt the burden of completing the research. My two main personal responses were related to the sermons and to the Bible Study, one disappointing and the other encouraging. Four sermons had been preached and I felt that they were all a little disappointing; as I wrote in my research journal, “The last of the … sermons were preached today. Overall, they were a little disappointing, especially in that they did not really exegete the chosen passage/texts.” In contrast, the one Bible Study was a real encouragement, as I wrote, “Last learner did a Bible Study for req. 4, again saw how valuable the options are.” The main motivation was that the learner who led the study was from the Democratic Republic of Congo, having grown up in a village and in a relatively traditional setting. As they led the study, they regularly introduced personal cultural insights that significantly enriched the study of the biblical passage that they had chosen, so integrating existing knowledge into new knowledge and suggesting deep learning (Fry et al, 2003b:18 and Nightingale et al, 1996:267). Once again it was probable that a research assignment or examination or test may not have given them the opportunity to communicate these insights in a meaningful manner.

With respect to the actual assessment item submissions, the first item, the exegesis, with one exception, was poorly completed. Most of the learners either did not complete the technical exegesis satisfactorily or were weak in the consideration of the main human relationship with God. In this, there were no particular indicators of deep learning. The second item, the sermon, was a little better; however, the submissions were still weak with respect to actual exegesis, while the quality of presentation varied between the learners. As with the first item, there were no particular indicators of deep learning. In both of these submissions, there was a sense that the learners were endeavouring to complete the course requirements, and were certainly not presenting work of the quality previously seen, although that in itself was not automatically indicative of the lack of deep learning (Marton & Säljö, 1984:45-46).

Only one learner chose the third option, the Bible Study. In their presentation of the Bible Study and their associated submissions, this learner presented work that

was of an above average quality. With respect to deep learning, the most significant indicator that they had utilized a deep learning approach was that they were able to make associations between cultural aspects of the biblical passage chosen and their own cultural experience and history. By drawing the association, they had not only enriched their own learning experience, they had also enriched the learning experience of the other learners who participated in their assessment presentation (Fry et al, 2003b:18; Martin & Säljö, 1984:54 and Nightingale et al, 1996:267).

The final option, personal meditation, was completed by seven learners, the same number as the detailed exegesis. While all the submissions were of a reasonable quality, only one seemed to reflect a deep learning approach. In this case, the specific learner was intentional in associating the material being meditated on with their own personal experiences. In this, they were drawing the material being studied into the reality of their own experiences, life and world. Significantly, this learner did not achieve the highest mark, even though they were better able to meet the personal dimension of the requirement than any other learner.

6.3.6 Final responses

6.3.6.1 Questionnaire responses

In the final questionnaire, the learners were only required to respond to one open-ended item, *In the space provided below, kindly reflect on your experience of the course, with particular reference to the approach to assessment* (learner responses in Appendix M). This section will focus on overall considerations and themes that emerge from the responses of the learners who completed the course.

The first consideration relates to the **overall experience** of the learners. There was little doubt that the learners had appreciated the course and the approach to assessment. Comments to this effect included, “I have really enjoyed it and will appreciate and cherish this experience for a long time”; and, “I found the course to be enjoyable and different to the other ... courses.” One learner was more

expansive, saying that "… I really enjoyed this new approach to doing assignments and this course. I felt that I was able to experience new things and I felt that I was able to explore new grounds." Additionally, one learner complimented me as the lecturer, "… I must say that I have and always have enjoyed the course (and the lecturer's dynamic style)." A further comment came from a learner who had enjoyed the course, although they had not found it easy: "I have enjoyed the course although not easy for me...."

In commenting on the approach to assessment, many of the learners reflected an appreciation of the **acknowledgement of differences** between learners and the associated variety in assessment. Two learners reflected this well, the first saying that "… the fresh approach to assessment was great as I feel that previous methods of assessment appeal to certain people but not to others." The other commented, "I feel that the *old* way of assessments favoured more those who are academics than those who aren't, so this *new* way of assessment gives for instance those who are creative an opportunity to express themselves without using literature." More specifically, it was observed that "… the options covered a wide area of learning from analytical thinkers to the arty types…." In terms of the experience, a learner commented that "… the options we had to choose from provided a fresh, interesting way of completing the course and learning what was necessary to complete the course." A final comment comes from a learner who said that "… this approach to assessment is really really good. It allows us to be more creative and comfortable with any option taken." However, within this was an important concern from a learner who commented, "I would have incl more options for the practical person opposed to the artistic person! This would have catered more for people like myself who are left brain, task orientated!" I had felt that I had covered all four areas well; however, this comment provided a caution that I must be sure that the creative and practical options must be clear and distinguishable. An examination of these options suggested that some of the practical options may have been more creative than practical.

A common theme through the semester was repeated in the final responses, namely that of the **technical requirements**. Certain of the learners highlighted this once again, reflecting that it is something that will require deliberate attention.

"In all of my critiques my one difficulty has only been that of expectation, because we had not done it before we were not familiar with the mediums and so were uncertain of the technical requirements of some of them!" Further to this was the brief and simple, "My suggestion is that in future or for others who will be doing the course, please give clarity to what you require." In the context of the lack of clarity, one learner reinforced a concern related to the actual (for requirement two) and perceived (for requirement three) higher marks obtained in the tests when compared to other assessment options:

> I know that it is not the common occurance [sic] but in my view some concern came up in the fact that a student who wrote the test got 92% and for instance an artwork would not receive that high a mark. So maybe a review on where one is given the opportunity to write a test should be done.

Fourthly, there was the theme referring to the **difficulty of options**, with one learner commenting that "… ironically I think that all the new options require more work than the traditional way of assignments, because they require that one not only understand the material but be able to reapply it to suit the chosen medium of assessment." Another reiterated this, but referring to the amount of effort required in the completion of the non-traditional options, "I think the way in which we are being assessed has encouraged the students to put much consideration and effort into their assignments." However, in the midst of this, it was observed that "…some of these approaches [to assessment] were less worried about technicalities than getting core concepts and reflecting on them."

Commenting on **the future**, there were three significant responses. Firstly, "… overall I am very pleased with this new approach and I am looking forward to see it implemented for all the courses"; secondly, "I wish we can adopt the approach for most of courses in college"; and, thirdly, "This has been a good experience and I do feel that it has been of benifet [sic] to me and should be used more in colleges to test students understanding of subjects."

Finally, there were certain **personal comments** that I felt reflected that MIBADL had impacted on learners at a personal level. The comments are varied, but valuable:

> I was a little weary [sic] because of the *unknown* factor. I felt unsure as to how the *different* ways of assessment would be evaluated. There was some risk involved in choosing *newer* options, and stepping away from the *stereotypical* options that I felt confident in. The reason I was able to take the risk in most of the assignments was the fact that I was confident in my ability in those areas, I enjoy challenges, I am not afraid to take a chance, and *very importantly I felt confident in the lecturer's ability to be fair and open in the assessment process*.

This suggested that the learners' trust in the lecturer is critical in MIBADL (acknowledging that it is crucial in all assessment). A second learner reflected that MIBADL had impacted them to the point that they "… even contemplate doing a deeper work in Old Testament." A final valuable comment was that "… I found this course to be such a blessing. My assessment requirements enabled me to explore different aspects of myself and enabled me to learn my material in an easier way that was more compatible with my personality."

Finally, two personal comments were particularly encouraging in the context of the research's being done in a Christian higher education institution. The first links to an opportunity for evangelism that arose through one of the assessment items; the learner comments:

> One of the assessment requirements gave me opportunity to teach the Pentateuch to my best friend, which led to his personal commitment to Jesus Christ. Had Dr de Jongh not being doing his doctorate, I doubt that I would have had a similar chance or opportunity.

The second learner observed that "... it was a wonderful experience and I thoroughly enjoyed all that I learnt. I believe this is the first course that has really impacted my relationship with God in causing my relationship with God to grow and become richer."

6.3.6.2 Interview responses

Following the submission of final questionnaire, I interviewed three learners to develop and expand what had been fed back in the questionnaires. At a technical level, I must comment that both the interviewees and I were feeling research and academic fatigue. The **first interviewee** indicated that this was possibly the best course they had completed at the College, explaining that the reason was that the learners had been afforded the opportunity to make choices. Through this, they felt that they were able to exercise liberty in choosing their preferred requirement option; although they did find the creative options a problem, as they did not regard themselves as an artist. When asked whether their situation of being a third language English speaker was a factor in the choices they made, their response was that it was not a significant one. Their final comment was that they would like to see more courses done in the same way.

The **second interviewee** was a very different learner and person, being regarded by many as the rebel of the group; however, they were also someone whose insights I greatly appreciated. Their main comment was that the approach to assessment opened up opportunities for varieties of expression and mediums. As a consequence, they felt that this had opened up doors for the learners and created opportunities that catered for the differences between learners. In terms of their overall evaluation, they viewed the emphasis on concepts rather than technical requirements, in certain options, as a great aspect of the approach to assessment, possibly indicating that the options were assisting to promote deep learning. Personally, they indicated that they disliked paying significant attention to technical requirements as opposed to coming to terms with the key concepts and ideas. Negatively, their only concern was the lack of clarity regarding the technical requirements for the course, “What is actually expected?”

The **third interviewee** indicated that they viewed the approach to assessment positively, and that they had enjoyed the use of options rather than the traditional one-way approach. This learner was a foreign African learner and they indicated that they felt that the approach should have made their work easier; however, in their experience of the course, this was not so, and their self-understanding was,

"… maybe I did not talk enough." In this, they suggested that they probably had not interacted sufficiently with me as the lecturer, being hesitant to do so in relation to all the College lecturers. This cultural challenge often presented in many of the African and Asian learners, who do not regard it as acceptable to interact with a lecturer on a one-to-one basis. Overall, they felt that the course as a whole had deepened their understanding of the Old Testament.

6.3.6.3 Researcher response

At this point of the course, I appreciated the generally positive response of the learners; while also valuing the critical concerns that had been raised, all of which contributed to the ongoing development of MIBADL. I was encouraged by the feedback of the learners, which reflected an understanding of what I was endeavouring to achieve, even though most of the feedback did not use the educational and technical language that would be used in education as a discipline. This was reinforced by learners whose work clearly demonstrated an unconscious deep learning approach; and by the learners who clearly indicated that the simple completion of the course requirements had far greater consequences than I had anticipated. In overview, what I saw had happened was that all the learners had completed the course requirements, that many of them had variously submitted items that indicated deep learning, and that some of them had had experiences that went beyond learning.

6.3.7 Integrated analysis of the data

Based on the preceding presentation and analysis of data, this section will endeavour to present an integrated analysis of the data, as a bridge between the preceding section and the following section (6.4, Empirical findings). Considering the data, an integrated analysis produces the following key response areas, not presented in any particular order: learner appreciation of MIBADL; concerns regarding technical requirements; appreciation of choice in assessment items; awareness of an allowance for different abilities; indicators of deep learning; and inclinations to surface or strategy learning.

6.3.7.1 Learner appreciation of MIBADL

The first key response area was that most, if not all, of the learners variously expressed an appreciation for MIBADL and the consequent approach to assessment. This was most evident in the personal interviews and the final questionnaires, while acknowledging that there were criticisms of aspects of the application. One learner expressed this saying, "... I really enjoyed this new approach to doing assignments and this course." With a view to the future, it was observed that this was "... a step in the right direction..."; while another learner commented that the approach to assessment had "... potential for greater learning and equipping...." Finally a learner commented, "I wish we can adopt the approach for most of the courses in college."

6.3.7.2 Concerns regarding technical requirements

As I have commented, there were criticisms of aspects of the application of the approach to assessment. The key response in this regard directly related to concerns regarding the technical requirements for items other than written assignments and tests. For example, two learners commented: "... you cannot always understand the technical requirements..." and "... the technical requirements is not understandable for me...." With respect to written assignments, the learners referred to the College's *Assignment Writing Guide*, which was an extensive guide to research for and writing of assignments, including the technical requirements of layout and the like. In relation to examinations or tests, I would argue that the learners felt confident, in what was expected, because they were familiar with them. The consequence was that when learners were either considering or completing an item they were unfamiliar with, there was a distinguishable expression of concern and uncertainty; for example, a learner who said that they were, "... a little weary [sic] because of the unknown factor." While I had included assessment criteria with each assessment item, it was apparent that the learners felt a need for more substantial guidance. For example, a learner who completed a book chapter commented, "... there is no layout given how to do it." Founded on these concerns were questions that linked to a concern regarding the allocation of marks, with an occasionally expressed understanding that

assignments and tests would obtain higher marks, or that options other than assignments or tests could not fail. Ultimately, the concern from most of the learners was that they needed more intentional guidance for options other than assignments and tests; as one learner wrote, “More stringent guidelines on what was needed.”

6.3.7.3 Appreciation of choice in assessment items

The third key response was the expressed appreciation of choice in assessment items. Most of the learners expressed their satisfaction with the options that were made available within each assessment requirement; for example, one learner said that “... [I] know that I have great options where I can choose what best [suits] my learning process”; while another commented, “... it is so interesting seeing the diversity in what we have chosen to do in our requirements.” This choice, however, produced two personal responses; on the one hand, it produced an expression of freedom (the word specifically used on a number of occasions), while, on the other, it created a degree of anxiety. The anxiety experienced by certain learners was directly linked to a concern that they make or made the correct choice, and also to a concern as to how they would perform in terms of the choice that they had made. However, overall, there was a significant expression of an appreciation for the choice that was available, with one learner expressing that the presence of choices had made it the best course that they had completed at the College to date.

6.3.7.4 Awareness of an allowance for different abilities

Linked to the appreciation of choice in the assessment items, was an awareness that the choice made allowance for different abilities (no learner referred to intelligences). The expressed awareness appears to have been based on an understanding amongst the learners that they were not all the same; this was seen in phrases such as, “... a variety of people and personality types...”, and “... opportunity to be more who we are....” From that basis, the learners indicated an awareness of that difference as being in the realm of abilities; this was reflected in comments including, “... I feel there were adequate options to cater for different

abilities", and "... the options covered a wide area of learning from analytical thinkers to the arty types...." While there were these generalized observations, certain learners also labelled the abilities, with creative being a label often allocated to certain of the assessment options. These observations included: "... visual areas...", "... more practical", "... artistic mediums...", and "... a more creative way...." These learner responses may be encapsulated by one learner who wrote, "I feel that the old way of assessments favoured more those who are academics than those who aren't, so this new way of assessment gives for instance those who are creative an opportunity to express themselves without using literature." An important aspect of the response of the learners is that certain of them did observe that the allowance for abilities did not imply or mean that assessment was consequently easier, with some noting that they were particularly challenging.

6.3.7.5 Indicators of deep learning

The data also presented indicators of deep learning in the assessment items submitted by the learners. While these responses cannot be strictly delineated and the language used was not technical, there certainly were indicators of deep learning. While these have been highlighted in preceding sections, they may be integrated in summary by highlighting the following aspects of response. Firstly, the sense of certain learners that they were functioning at a deeper level; for example, "... the different mediums allowing for greater depth of learning...", and "... I can engage the subject at a deeper level." Secondly, learners who were internally motivated in their choice of assessment item, occasionally indicating a desire for personal development , growth and self-enrichment or the willingness to "... try something new." Thirdly, learners who indicated that they had understood that the assessment options were concerned with their understanding of concepts, meaning and structures. Fourthly, there were assessment submissions in which the learners had clearly drawn childhood, cultural and life experiences into their new learning. And, finally, there were those submissions in which the learners had integrated their existing and new knowledge in a meaningful manner.

6.3.7.6 Inclinations to surface or strategy learning

In contrast to the previous response, it was apparent that there was also an inclination amongst the learners to surface or strategy learning. While this response was not necessarily as developed in its self-understanding, it was apparent when learners were asked about the reasons for the choices that they made. In terms of motivations to surface or strategy learning, the main factors were time pressures, perceptions that a given option was easier or that others were harder, uncertainties regarding technical requirements, a desire for a higher mark, fatigue and tiredness toward the end of the semester, and crisis responses. What was noticeable, was that certain of these responses may be attributed to the learners' unfamiliarity with many of the assessment items, generally other than the written assignments and tests. The indicators of this would have included the perception of easier-harder and uncertainties regarding technical requirements. It was, however, observable that, despite these inclinations to surface or strategy learning, none of the learners suggested that the approach to assessment should consequently be changed.

6.4 EMPIRICAL FINDINGS

A consideration of the empirical findings of the research will be presented in relation to the research questions. These were presented in chapter one and relate to the assessment of learning and deep learning; multiple intelligences, assessment and deep learning; and principles for multiple intelligence based assessment for deep learning. In this section, the preceding data, especially the integrated analysis, will be utilized to respond to the three research questions. Theoretically, these three research questions were responded to in chapter two and three where attention was given to the assessment of learning and deep learning; while chapter four gave consideration to the theory of multiple intelligences and assessment, and then their application to assessment in the promotion of deep learning. Therefore, the response to the research questions will be linked to the principles that were derived through those chapters: principles for deep learning in the context of the assessment of learning (see 3.4,Principles for Deep Learning Assessment); principles for the assessment of learning from

theories of multiple intelligences or MIBA (see 4.4, Principles for Multiple Intelligences Based Assessment) and principles for multiple intelligences based assessment for deep learning or MIBADL (see 4.5.2, Principles for Multiple Intelligences Based Assessment for Deep Learning). Appreciating that these principles overlap, attention will not be paid to all the principles listed under each heading, while the consideration of the research findings with respect to specific principles will be biased toward the consideration of the findings with respect to research question three.

6.4.1 Research question one, assessment of learning and deep learning

The first research question concerned the relationship between the assessment of learning and deep learning, and asked how the demands of deep learning may be promoted through the assessment of learning. Seven principles were derived (see 3.4, Principles for Deep Learning Assessment), with the first four being carried through into the following two sets of principles for MIBA and MIBADL. Consequently this sub-section will only consider the empirical findings as they relate to principles five to seven, being:

5. Assessment requirements and criteria are clearly and explicitly stated.
6. Assessment for deep learning is supported by good preparatory guidance, material and personal support, and appropriate resourcing.
7. Assessment gives early and comprehensive feedback, with the intention of addressing weaknesses and improving learning.

In the discussion of the seven principles for deep learning in the context of the assessment of learning, I commented that the final three principles, in particular, should be characteristic of all assessment practice. For that reason, these three principles were not intentionally carried through into the principles of MIBA and MIBADL. However, the empirical data highlights the need for these three principles to be applied not only to all assessment practice, but to MIBA and MIBADL in particular.

Both MIBA and MIBADL are characterized by the inclusion of assessment items and options that may be completely or reasonably unfamiliar to the learners. While most of the learners may be familiar (even if poorly) with the general requirements for written assignments and examinations or tests, they are generally unfamiliar with the requirements for the other options that were included in the assessment items and options. While I had included essential assessment criteria, the data strongly suggests that such a statement of assessment criteria is inadequate and unsuitable for most learners. While I had endeavoured to provide additional guidance and support to the learners, both individually and corporately, it was apparently inadequate.

Therefore, with respect to principles five to seven, it is apparent that significant attention needs to be given to the development of meaningful guidelines for the learners, congruent with the format and structure of guidelines that most higher education institutions prepare for written assignments and examinations or tests. The simple indication of key assessment criteria is inadequate, and resulted in unintended inequality and uncertainty in most of the learners. As such, I would further find that at least principle five be intentionally adopted into the principles for both MIBA and MIBADL.

6.4.2 Research question two, multiple intelligences, assessment and deep learning

The second research question built on the first and asked how the theories of multiple intelligences could be utilized to contribute to the assessment of learning, and in that to promote deep learning. The second half of the research question was fully responded to in relation to research question three and will be dealt with in the following section. With respect to the first half of the question, this was answered in the development of the five principles for the assessment of learning from theories of multiple intelligences or MIBA. In response to research question two and the concern for the contribution of theories of multiple intelligences to the assessment of learning, the key aspect of each of the principles has been highlighted by means of italics as follows:

1. Acknowledge that *learners have* ***different intelligence*** *strengths*.
2. Acknowledge that *learners achieve differently*.
3. *Assessment options should acknowledge* ***different intelligences***.
4. *Variety and choice apply* in the specific assessment of all objectives and outcomes.
5. The *variety in assessment* is to be based on ***different intelligences***.

It is important to note that theories of multiple intelligences introduce two main considerations to the assessment of learning, namely, an acknowledgement of differences between learners, and the consequent requirement for variety and choice. The empirical data contributed to findings with respect to both of the considerations.

With respect to the acknowledgement of differences between learners (see 6.3.7.4 Awareness for an allowance for different abilities), the data shows that the learners were both aware and appreciative of the allowance in the assessment items for differences between learners, correlating particularly with principles one to three. This was seen in their acknowledgement that both the items allowed the group to have choices and that the choices were a tacit acknowledgement that the learners were not all the same. Furthermore, the learners themselves spoke both directly and indirectly of the differences between learners being on the basis of abilities. The word ‘abilities’ was specifically used on more than one occasion while indirect allusions were found in references to different abilities, including, artistic, creative and practical, as well as academic. Apparently unknown to the learners, these were terms that are commonly used in theories of multiple intelligences. It is significant to note that the term ‘ability’ was used and not the term ‘intelligence’, which indicated a natural inclination to the language of Sternberg rather than Gardner.

The learners furthermore indicated an appreciation of choice in the assessment items (see 6.3.7.3, Appreciation of choice in assessment items), a number of learners reflecting an awareness of a correlation between the available choices and the differences between them as individual learners. Their awareness of the options and the associated choice correlates particularly with principles four to six,

where the requirement is for variety and choice based on different intelligences. Therefore, with respect to research question two, it may be argued that theories of multiple intelligences made a positive contribution to the assessment of learning and was appreciated by most, if not all, of the learners.

6.4.3 Research question three, principles for deep learning and multiple intelligences for assessment

The third research question sought answers to the question, 'What principles may be derived from the demands of deep learning and the theories of multiple intelligences for the assessment of learning?' In response to this question, four principles for multiple intelligences based assessment for deep learning were proposed, namely:

1. The learner's envisaged achievement is integral to course design, acknowledging that learners have difference intelligence strengths and achieve differently.
2. The focus is on significant principles and structures; therefore, allowance is made for different intelligence strengths, different ways of achieving, and for variety and choice.
3. Variety and choice in assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.
4. A wide variety of methods and types of assessment is utilized, based on an intentional consideration of different intelligences.

In the application of these principles, I endeavoured in the development of the assessment items to apply all four. With respect to the principles, the following were applied to the assessment of learning: learner differences were acknowledged by variety and choice in the assessment items; by using different assessment options, the focus was placed on significant principles and structures; variety and choice were directly linked to the stated course objectives, drawn from the course aims and purpose; and the variety of assessment items was based on theories of multiple intelligences. The important question, at this juncture, is

whether the application of these principles contributed to deep learning and whether that is supported by the data.

While the learners had indicated an appreciation of MIBADL (see 6.3.7.1), that alone was inadequate for a finding regarding the role of the approach to assessment in the promotion of deep learning. The two significant areas for consideration relate to the indicators of deep learning (6.3.7.5) and the inclinations to surface or strategy learning (6.3.7.6). A consideration of the related data, indicates that there was data to show that the approach to assessment may have contributed to a deep approach to learning; however, that needs to be considered in the light of the data indicating inclinations to surface or strategy learning. A consideration of the data can, therefore, find that the application of MIBADL appears to have contributed to the promotion of deep learning, while not keeping learners from surface or strategy learning. However, as has been previously argued (see chapter three), deep learning is motivated by both internal and external factors, with the assessment of learning being an external factor.

Accepting that the educator has limited influence on the internal motivation of learners, this section needs to consider to what extent the application of MIBADL to the assessment of learning enhanced the internal motivation to deep learning. Acknowledging that there were numerous occasions on which the learners indicated or reflected a surface or strategy approach, it is significant to take note of the indicators of deep learning. The indicators of deep learning are listed in a preceding section (6.3.7.5, Indicators of deep learning) as: learner awareness of deep level functioning; internal motivations; focus on concepts, meaning and structures; reference to childhood, cultural and life experiences; and integration of existing and new knowledge. It has been argued that many of these indicators would not have been expressed had it not been for the MIBADL approach to assessment; therefore, it is argued that an empirical finding is that multiple intelligences based assessment does at least contribute to the promotion of a deep approach to learning.

6.4.4 A statement of the empirical findings

The research problem was whether theories of multiple intelligences had a contribution to make to the promotion of deep learning through the assessment of learning. Based on the preceding discussion, the empirical findings relevant to the research problem may be presented as follows:

1. While there was a distinguishable inclination amongst the learners toward surface or strategy learning, multiple intelligences based assessment did contribute to the promotion of deep learning.

2. Learners were aware of the differences between the assessment options and correlated these to differing abilities between learners, demonstrating an awareness of the impact of theories of multiple intelligences on assessment.

3. Learners were appreciative of the choice that they had with respect to options for assessment, often correlating this with their own abilities, interests and perceived strengths.

While not directly related to the research problem, it was also found that

4. Significant attention needs to be given to the development of meaningful guidelines for all assessment items, beyond the presentation of generic assessment criteria.

5. The principles for both MIBA and MIBADL need to include an intentional reference to the need for meaningful guidelines for the completion of assessment items.

6.5 SYNTHESIS

This chapter has reported on the application of MIBADL to the assessment of learning in higher education context. It has described the application and process followed, including the development of the assessment items, the introduction of the course and research to the learners, how I approached the teaching of the course, and how the questionnaires and interviews were applied. Following on from that, I have discussed and content analyzed the data obtained from three key sources: the questionnaires and interviews, my personal research journal, and a consideration of the learners' assessment items. Based on these, I have presented an integrated analysis of the data by means of a consideration of the key response areas: learner appreciation of MIBADL; concerns regarding technical requirements; appreciation of choice in assessment items; awareness of an allowance for different abilities; indicators of deep learning; and inclinations to surface or strategy learning.

Based on the empirical data, the empirical findings were presented as they relate to the three research questions presented in chapter one. In summary it was found that while certain learners were inclined to surface or strategy learning, there were clear indications that MIBADL had promoted deep learning; that learners were aware of differences in the assessment items and appreciated the choice that they were given seeing that they often correlated with their own abilities, interests and perceived strengths; that meaningful guidelines must be developed for all assessment items; and that the need for developed guidelines be included in the principles for both MIBA and MIBADL.

In the following chapter, these empirical findings will be considered, together with the preceding theoretical considerations, in the light of my research problem, purpose and aims, and research questions. This will be completed by means of a discussion of my research findings, a final presentation of the principles for both MIBA and MIBADL, and a consideration of the contribution of my research. Finally, I will address the limitations of my research, together with suggestions for further research.

CHAPTER 7:
RESEARCH FINDINGS, CONTRIBUTION, LIMITATIONS AND FURTHER RESEARCH

7.1 INTRODUCTION

In this research report, I have presented the origins of my research, a discussion of the key theoretical concepts, and the development of MIBADL as a response to the research problem. Following that, I have reported on the empirical research that I conducted and presented the empirical findings. In this final chapter, I will consolidate the research by first repeating the research problem, purpose and aims. In the light of those, I will present the research findings, and then submit a revised statement of the proposed principles for MIBA and MIBADL in the light of the empirical and research findings. Finally, I will delineate the broader contribution of the research, the research limitations, and suggestions for further research.

7.2 RESEARCH PROBLEM, PURPOSE AND AIMS

7.2.1 The research problem

In presenting the research problem, introductory consideration was given to the three main theoretical areas that contributed to my research; namely, the challenges of the assessment of learning, the demands of deep learning, and the contribution of theories of multiple intelligences. My contention was that the theories of multiple intelligences may have a valuable contribution to make to the resolution of certain of the challenges and tensions in both the assessment of learning and the desire to promote deep learning. The research problem, then, was that limited consideration has been given to the possible contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning within a higher education context. In other words, there is a gap in the application of theories of multiple intelligences to the assessment of learning and in an examination of the role that theories of multiple intelligences may play in the promotion of deep learning through the assessment of learning.

The research problem generated the following research questions which motivated and directed my research. The first concerned the relationship between the assessment of learning and deep learning, and asked how the demands of deep learning might be promoted through the assessment of learning. Building on this, the second question asked how the theories of multiple intelligences could be utilized to contribute to the assessment of learning, and in that way to promote deep learning. Thirdly, answers were sought to the question, 'What principles may be derived from the demands of deep learning and the theories of multiple intelligences for the assessment of learning?' Consideration of these questions then elicited the construction of a theoretical framework for the assessment of learning for deep learning, utilizing theories of multiple intelligences.

7.2.2 The purpose of the research

In the light of the research problem, the overall purpose of the research was to examine the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning.

7.2.3 The aims of the research

In terms of the research problem and the purpose of the research, the aims of the research were:

1. To examine the assessment of learning in general and then to demonstrate how the demands of deep learning may be promoted through the assessment of learning.
2. To explore the potential contribution of theories of multiple intelligences to the effective assessment of learning.
3. To consider the application of the demands of deep learning and theories of multiple intelligences to the assessment of learning.
4. To propose a framework for the assessment of learning for the promotion of deep learning in the context of theories of multiple intelligences.

5. To derive principles for the assessment of learning for the promotion of deep learning in the context of the theories of multiple intelligences.
6. To develop and practically apply the principles to one course of study in a higher education setting.

Considering the fact these aims are not mutually exclusive, two main areas will be dealt with in the following presentation of my research findings, in the context of the purpose of the research. Firstly, the contribution of theories of multiple intelligences to the assessment of learning (research aims 2 & 6); and secondly, the promotion of deep learning through the assessment of learning in the context of theories of multiple intelligences (research aims 1, 3, 4, 5 & 6).

7.3 RESEARCH FINDINGS

While the primary focus of my research was to examine the potential contribution of theories of multiple intelligences to the promotion of deep learning through the assessment of learning, an associated purpose was to consider the contribution of theories of multiple intelligences to the assessment of learning. For clarity of presentation, I will present my research findings with respect to the assessment of learning in general first, and then consider the findings with respect to the promotion of deep learning.

7.3.1 Findings related to the contribution of theories of multiple intelligences to the assessment of learning

With respect to the contribution of theories of multiple intelligences to the assessment of learning, my findings were:

1. Theories of multiple intelligences have a positive contribution to make to the aims of and requirements for the assessment of learning.
2. Learners were aware of and appreciated the variety available in assessment items.

3. Learners need clear guidance with respect to technical requirements for assessment options.

7.3.1.1 Contribution to the assessment of learning

In sections 2.3 and 2.4, I presented the aims and requirements of the assessment of learning as derived from the literature on the assessment of learning. Under aims, I considered the measurement of achievement, motivation of learning, monitoring of progress and supporting of learning; while, under requirements, attention was given to validity, reliability, fairness and practicability. Attention will be given to each of these in turn.

7.3.1.1.1 Contribution in the light of the aims of assessment

The most common aim for the assessment of learning is that of the **measurement of achievement** (Stringer, 2008:159), together with scoring and ranking of the learners' mastery of that which they are expected to have learnt (Ebel, 1998:46). With respect to this aim, this study made no specific contribution.

Regarding the **motivation of learning**, an increasingly important aim of assessment (Gardner, 1993:178 and Siebörger & Macintosh, 2004:6), the utilization of theories of multiple intelligences in the construction of assessment items made a definite contribution. It is apparent in the learner feedback (from questionnaires and interviews) in my empirical research that learners were motivated in their learning. A number of learners are recorded as having specifically commented on their positive response to the assessment items and, with that, the desire and intention to learn more. Certain of the learners also commented that they appreciated not having to complete the more typical research assignments and tests, which are not always well regarded by learners (see Logan, 1971:8).

In relation to the third aim of assessment, the **monitoring of progress**, and the feedback to learners about their achievements (Lambert & Lines, 2000:4), the application of theories of multiple intelligences made no notable contribution. The

use of assessment for the monitoring of progress by both the educator and the learners may be achieved in most approaches to assessment. However, an unanswered question is the extent to which the use of multiple intelligences based assessment provides a more authentic or realistic picture of a learner's progress.

Finally, with respect to the **supporting of learning**, in terms of the development of the learner (Lazear, 1999:81; Walvoord & Anderson, 1998:17 and South African Qualifications Authority, 2005c:16), I am unable to make any finding as to whether the use of multiple intelligences based assessment made any specific contribution. It could be argued that assessment that is in line with the intelligence strengths of the learner might produce a better insight into their progress and so contribute to better support in terms of developing the learner; however, such a finding cannot be made in the light of my research.

In summary, with respect to the aims of assessment, it can be argued that application of theories of multiple intelligences and multiple intelligences based assessment contribute to the motivation of learning, do not undermine the measurement of achievement, and may contribute to the monitoring of progress and support of learning.

7.3.1.1.2 Contribution in the light of the requirements of assessment

Defining the essence of **validity** in assessment as that the assessment item measures what it is supposed to measure (Haines, 2004:32 and Solomon, 2002:67), then I would suggest that the application of theories of multiple intelligences makes a positive contribution to the reduction of the indirect impact of the form of assessment. Walvoord and Anderson (1998:22) highlight the need for assessment items to be chosen on the basis that they elicit the desired or intended kind of learning; a requirement reinforced by Luckett and Sutherland (2000:106) when they refer to 'fitness *of* and *for* purpose.' By using theories of multiple intelligences to shape assessment items, learners are presented with a choice with respect to the form in which they demonstrate their learning. A consideration of theories of multiple intelligences reduces the impact of the form of assessment

and increases the likelihood that the learner is able to demonstrate their learning, so increasing validity.

In relation to **reliability**, being the consistency of assessment across varied circumstance and contexts (Nightingale et al, 1996b:271 and Wojtczak, 2002:¶12), I would propose that when theories of multiple intelligences are considered in the construction of assessment items there is no measurable impact on reliability. However, a definitive finding in this regard cannot be made.

The third requirement is that of **fairness**, both in the construction of assessment items (Haines, 2004:32-33) and in the learners' experience of the assessment item or items (Siebörger & Macintosh, 2004:13). In the context of the application of theories of multiple intelligences and MIBA, my finding is that a positive contribution is made to fairness. Firstly, the construction of items that are considerate of theories of multiple intelligences means that the items are more likely to be fair in that the different intelligence strengths are catered for. Given that fact, secondly, the learners' experience is more likely to include a sense of fairness, which is not always present in the more typical reading and writing focus (Sternberg, 2006a, 2006b & 2007). This second observation was borne out when a number of learners expressed an appreciation for the variety, both for themselves and in the light of a recognition that not all learners are the same.

Finally, with respect to **practicability** (Geyser, 2004:97-89 and Lambert & Lines, 2000:18), it is my finding that assessment considerate of theories of multiple intelligences at least does not add any additional burden. Wojtczak (2002) proposes that variety in assessment may positively contribute to practicability; however, that was not a consideration of my research and a finding in this regard cannot be made.

In summary, with respect to the requirements of assessment, I found that the application of theories of multiple intelligences and multiple intelligences based assessment makes a positive contribution to fairness; a likely contribution to practicability; and may make a contribution to validity and reliability, however, the extent of that contribution cannot be determined on the basis of my study.

7.3.1.2 Learners' awareness and appreciation

As extensively reported in the preceding chapter, it was apparent that learners were both aware of and appreciated an approach to assessment that included variety (see 6.3.7). While the learners were not aware of the specific foundation on which the assessment items were based, there was adequate awareness of the differences that were associated with differences between learners. This was observable in references to abilities and personality types as general comments, together with specific references such as 'practical', 'artistic' and 'creative.' Together with this was an expressed appreciation for the approach to assessment that, in certain cases, was specifically highlighted by certain learners. This was observable in comments such as "... great options where I can choose what best [suits] my learning process..." and "... it is interesting seeing the diversity..."

In summary, I found that the learners were aware of and appreciated the approach to assessment that was founded on theories of multiple intelligences, even if their awareness was not expressed in the specific language and terminology of theories of multiple intelligences.

7.3.1.3 Technical guidance

As extensively reported in the preceding chapter, the main concern of the learners was that the assessment criteria, as presented, was inadequate and they felt a strong need for significantly more extensive technical guidance. For example, certain learners expressed uncertainty in relation to the requirements for works of art; while a number experienced a lack of clarity in relation to items such as journals and posters. Farmer and Eastcott (1995:88-89) emphasize this need as follows, "Having a clear understanding, as a learner, of where one is going and what one is expected to be able to do affects students' desire to learn." This indicates that clear technical guidance is not only important for the satisfactory completion of the assessment items, it also has a direct influence on the aim of motivating learning.

In summary, I found that in my research I had not provided adequate and satisfactory technical guidance to the learners. This is a critical area for improvement inasmuch as it will address the learners' expressed need for improved technical guidance, and therein will contribute to the motivation of learning.

7.3.2 Findings related to the promotion of deep learning through the assessment of learning in the context of theories of multiple intelligences

With respect to the promotion of deep learning through the assessment of learning in the context of theories of multiple intelligences, my findings were:

1. Theories of multiple intelligences make a positive contribution to the construction of assessment items that promote deep learning.
2. Assessment that is shaped by theories of multiple intelligences contributes to the promotion of deep learning in certain learners.

7.3.2.1 Constructing assessment items

Earlier in this study I presented four principles for multiple intelligences based assessment for deep learning (see 4.6.2, revised in 7.4.3). It is my finding that the application of the theories of multiple intelligences not only informs those principles, it also makes a positive contribution to the construction of the related assessment items. An examination of the four principles justifies this finding. In the following presentation of the principles, the proposed impact of the application of theories of multiple intelligences can be seen in the italicized sections of the principles:

1. The learner's envisaged achievement is integral to course design, *acknowledging that learners have difference intelligence strengths and achieve differently*.

2. The focus is on significant principles and structures; therefore, *allowance is made for different intelligence strengths, different ways of achieving*, and for variety and choice.
3. Variety and choice in assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.
4. A wide variety of methods and types of assessment is utilized, *based on an intentional consideration of different intelligences*; with comprehensive guidelines available for all forms of assessment.

It is apparent that the principles are shaped by theories of multiple intelligences in that differences between learners are acknowledged and that assessment items take those differences into consideration. I would argue that the acceptance of theories of multiple intelligences legitimizes the use of variety in the construction of assessment items. Such variety can be considerate of and shaped by theories of multiple intelligences.

This may be argued from the principles as follows. In principle one, reference is made to learners achieving differently; if they achieve differently, then they should be assessed differently. If their differences in achievement are associated with the different intelligences, then it follows that the different intelligences should be considered in the construction of assessment options. The second principle requires an allowance for different intelligence strengths in the construction of assessment items, and reiterates that learners achieve in ways that differ on the basis of the intelligence strengths. Principle three associates with theories of multiple intelligences in the requirement for variety and choice, best achieved by a consideration multiple intelligences. The final principle is a clear statement of what had been argued with respect to the first three principles; namely that variety in assessment is best achieved '... based on an intentional consideration of different intelligences....'

In summary, it is my finding that the application of theories of multiple intelligences can make a discernible and positive contribution to the construction of assessment

items that promote deep learning. However, that such promotion of deep learning is not guaranteed, as will be discussed in the following section.

7.3.2.2 Promoting deep learning in certain learners

In chapter three (Table 3.1, Deep and Surface Approaches to Learning) I presented fourteen features of deep learning, based on a variety of sources (notably Biggs, 2003; Bowden & Marton, 1998; Marton & Säljö, 1984 and Ramsden, 2003). In examining my finding that assessment shaped by theories of multiple intelligences contributes to the promotion of deep learning in certain learners, I will variously relate my theoretical research and empirical data to these aspects.

Positively, the choice and variety presented in assessment opened up the opportunities for learners to express their mastery of the course outcomes in different ways. This was especially observable in certain submissions by the learners that reflected aspects of deep learning including the relating of the material to everyday experience (Ramsden, 2003:42), references to existing knowledge (Marton & Säljö, 1984:46), internal or intrinsic motivation (Atherton, 2005a:¶5), reflection on personal meaning (Ramsden, 2003:42) and the demonstration of complex understanding (Bowden & Marton, 1998:51). What was significant is that most of these aspects of deep learning were expressed in the assessment options other than 'academic'. In other words, the inclusion of creative, practical and relational assessment items appears to have been determinative in the promotion of deep learning.

By contrast, it was apparent from the empirical research that the application of MIBADL did not guarantee that the learners would make use of a deep learning approach. The learners indicated that they were often influenced by a variety of factors; including, time pressure, uncertainties and familiarity with certain forms of assessment. Furthermore, it cannot be concluded that the use of MIBADL will guarantee consistent use of a deep learning approach in any of the learners. In the light of this, it cannot be concluded that the use of MIBADL alone will guarantee that the learners will utilize deep learning approaches.

In summary, it was my finding that assessment shaped by theories of multiple intelligences contributes to the promotion of deep learning in certain learners. However, it should be noted that the learners did not necessarily maintain a deep approach to learning throughout the course of study.

Overall, it was found that the application of theories of multiple intelligences makes a positive contribution to the construction of assessment items that promote deep learning; however, that the contribution is limited by a variety of other factors that impact on learners.

7.4 PRINCIPLES FOR DEEP LEARNING ASSESSMENT, MIBA AND MIBADL

While the proposed principles for deep learning assessment, Multiple Intelligences Based Assessment (MIBA) and Multiple Intelligences Based Assessment for Deep Learning (MIBADL) have been previously presented in chapters three and four, this brief section presents the revised principles, based on what has been learnt from the empirical research, with the addition of an intentional reference to the need for technical guidance for learners. In the light of the learners' comments and the findings of the research, the main revision to the various principles relates to their concerns about the technical requirements for the various assessment options.

With respect to the principles for deep learning assessment, the phrase, "...with comprehensive guidelines available for all forms of assessment," has been added to the fifth principle, such that it now reads: "Assessment requirements and criteria are clearly and explicitly stated, *with comprehensive guidelines available for all forms of assessment*." Similarly, the principles for MIBA are expanded by the addition of a further principle, numbered six and reading, "Assessment in the context of theories of multiple intelligences clearly and explicitly states requirements and criteria, *with comprehensive guidelines available for all forms of assessment.*" With respect to MIBADL, this has been done by the addition of the phrase, "... with comprehensive guidelines available for all forms of assessment" at the end of the fourth principle, so reading: "A wide variety of methods and types of

assessment is utilized, based on an intentional consideration of different intelligences; *with comprehensive guidelines available for all forms of assessment*."

7.4.1 Revised principles for deep learning assessment

1. Assessment is integral to course design and centred on the learner's envisaged achievement.
2. Assessment requirements focus on significant principles and structures.
3. Assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.
4. Assessment makes use of a wide variety of methods and types.
5. Assessment requirements and criteria are clearly and explicitly stated, with comprehensive guidelines available for all forms of assessment.
6. Assessment is supported by good preparatory guidance, material and personal support, and appropriate resourcing.
7. Assessment gives early and comprehensive feedback, with the intention of addressing weaknesses and improving learning.

7.4.2 Revised principles for Multiple Intelligences Based Assessment

1. Assessment in the context of theories of multiple intelligences acknowledges that learners have different intelligence strengths.
2. Assessment in the context of theories of multiple intelligences acknowledges that learners achieve differently.
3. Assessment in the context of theories of multiple intelligences requires that assessment options should acknowledge different intelligences.
4. Assessment in the context of theories of multiple intelligences applies variety and choice in the specific assessment of all objectives and outcomes.

5. Assessment in the context of theories of multiple intelligences bases variety in assessment on different intelligences.
6. Assessment in the context of theories of multiple intelligences clearly and explicitly states requirements and criteria, with comprehensive guidelines available for all forms of assessment.

7.4.3 Revised principles for Multiple Intelligences Based Assessment for Deep Learning

Below is a presentation of the revised principles for MIBADL, including the revision referred to, together with a basic explanation of each of the principles.

7.4.3.1 Principle 1

The learner's envisaged achievement is integral to course design, acknowledging that learners have different intelligence strengths and achieve differently.

The envisaged achievement of the learner, as expressed in course objectives and/or outcomes, is an integral aspect of course design and demands that assessment contributes in a deliberate and purposive manner to the development and education of the learner. As such, the educator who designs a course should be able to explain *why* the assessment has been designed as it has, and what role it plays in achieving the overall objectives and outcomes of the given course. However, in terms of theories of multiple intelligences, learners are different; educationally – one of the key areas of difference is that they have different intelligence strengths and consequently achieve differently. Multiple intelligence based assessment demands that allowance be made for the differences between learners with respect to their intelligence strengths and the different ways in which learners achieve. The first principle, therefore, emphasizes that the learner's envisaged achievement is paramount in course design; but adds that the way in which that principle can be achieved commences with the acknowledgement of the differences in intelligence strengths, and the reality that learners will achieve differently.

7.4.3.2 Principle 2

The focus is on significant principles and structures; therefore, allowance is made for different intelligence strengths, different ways of achieving, and for variety and choice.

Assessment items that focus on principles and structures are more likely to promote deep learning. By focusing on significant principles and structures, learners will be able to focus on the important aspects of what is being studied and be able to integrate those into their broader spectrum of knowledge and learning, all of which can assist in the promotion of deep learning. If significant principles and structures are the focus of assessment for deep learning, then, as for the first principle, differences between learners should not be an unduly advantageous or inhibiting factor. The theories of multiple intelligences contribute to an understanding of the differences between learners which can be utilized as the context within which allowance is made for different intelligence strengths, different ways of achieving, and for variety and choice.

7.4.3.3 Principle 3

Variety and choice in assessment is based on clear and stated objectives and outcomes, which are directly associated with the aims and purpose of the course.

The practical starting point for the application of the first two principles lies in this principle, which, though not directly referring to theories of multiple intelligences, bases the call for variety and choice on the acceptance of the intelligence differences between learners. Variety and choice in assessment is to be directly linked to clear and stated objectives and outcomes which are directly linked to the aims and purpose of the course. However, it needs to be understood that the *choice* aspect of these principles is called for because of the intelligence differences between learners. If learners are different, as theories of multiple intelligences argue, then the best way to cater for those differences is to permit learners choice in variety with respect to assessment. However, that variety should be intentional as reflected in the fourth and final principle.

7.4.3.4 Principle 4

A wide variety of methods and types of assessment is utilized, based on an intentional consideration of different intelligences; with comprehensive guidelines available for all forms of assessment.

In principle three it has been argued that learners should have choice in assessment; in this principle, it is argued that such choice should be based on the intentional consideration of different intelligences. In other words, when choice is worked into assessment, it is done on the basis of an intentional consideration of different intelligences, as expressed in theories of multiple intelligences. The use of an intentional theoretical foundation would meaningfully contribute to the design of assessment that is deliberate, rather than the random determination of variety in and for assessment. Therefore, the point of this principle is that the theories of multiple intelligences be utilized for the intentional development of variety in the assessment of learning.

7.5 CONTRIBUTION OF THE RESEARCH

In the light of the description of the context and problem in chapter one, I endeavoured to carry out research that would make a contribution to the following main areas: firstly, assessment that would promote deep learning; secondly, applying the theories of multiple intelligences to assessment; and thirdly, proposing a framework for assessment for deep learning in the context of the theories of multiple intelligences. Secondary to these would be a contribution to Outcomes-Based Education, Christian education, higher education and education in general.

7.5.1 Assessment that promotes deep learning

As previously discussed, in both chapter six and the preceding discussion, it was one of my intentions to make a contribution to the theory and practice of the use of assessment as a means to promote deep learning. In both my study of the literature (chapter 4) and my empirical research (reported on in chapter 6), I have

argued and demonstrated that the assessment of learning is a critical influence on the learner's choice or decision for a deep approach to learning. Further to this, I have proposed, revised and submitted seven principles for deep learning assessment (see 7.4.1, Revised principles for deep learning assessment). Therefore, I contend that this study has contributed to a theoretical and practical understanding of assessment that would promote deep learning.

7.5.2 Application of theories of multiple intelligences

As I demonstrated in the chapter on theories of multiple intelligences, while much work has been done on the application of theories both to methods of teaching and to the effect on the learners themselves, very limited work has been done on the application of the theories to assessment, even though Gardner (1993:174-179) pointed in this direction and Sternberg (1998:10-11) addressed the possibility. The main exceptions being Lazear's consideration of an application in primary education (1998, 1999 & 2009), and the work of Sternberg (2004a & 2007) and his colleagues (with Grigorenko, 2003 and with Grigorenko & Li-fang, 2008) in the context of early higher education. However, most of the work that has been done is of limited immediate application to higher education, in that Lazear has focused on schooling and Sternberg on early higher education stages.

My use of the theories as foundational to both my research into the promotion of deep learning and the development of MIBADL fills a gap in the application of the theories to education in general and higher education specifically. In my own conversations with other educationalists and scholars, my research has been regarded as both interesting and significant because so little research of this nature has in fact been carried out. Further to this, the intentional use of the theories of multiple intelligences, both in the development of a framework for assessment in general and in its specific application to assessment for the promotion of deep learning in particular, is arguably a unique contribution both to theories of multiple intelligences and educational theory and practice (see following section for discussion).

Therefore, I contend that this study has contributed to a theoretical and practical development of theories of multiple intelligences in relation to the assessment of learning and the promotion of deep learning. This contribution is of particular significance in the light of Gardner's (2003:11) observation that "... much work need to be done on the question of how the intelligences can be best mobilized to achieve specific pedagogical goals."

7.5.3 A framework for assessment

In the study of the literature (chapters 2-4), I examined three main concepts, namely, the assessment of learning, deep learning and theories of multiple intelligences; together these formed the theoretical framework for the study. I examined the aims and requirements of the assessment of learning, emphasizing that variety is available for the construction of assessment items. I argued that the use of variety in the assessment of learning can reduce the *distance* between the learner and the outcome being assessed. I then considered a deep approach to learning and its relationship with the assessment of learning, on the basis of which I derived seven principles for deep learning assessment. Finally, I examined theories of multiple intelligences and argued that the application of theories of multiple intelligences can contribute to the promotion of deep learning through the assessment of learning.

Based on the study of literature, I presented principles that may be derived from theories of multiple intelligences for the assessment of learning. Following that I synthesized those principles with the principles for deep learning assessment (see 3.4, Principles for deep learning assessment) to present principles for the assessment of learning for the promotion of deep learning in the context of theories of multiple intelligences. The four derived principles being referred to as Multiple Intelligences Based Assessment for Deep Learning, abbreviated MIBADL (see 4.6.2, Principles for multiple intelligences based assessment for deep learning). Finally, I operationalized these principles in a practical construct that may be utilized in the construction of assessment items in a unit of study in higher education (see 4.7, A practical construct for the application of MIBADL).

Therefore, I contend that this study has contributed to the development of a theoretical framework for multiple intelligences based assessment that promotes deep learning. This contribution being of significance in that I am unaware of any similar proposal having been made; at least not with an application to higher education.

7.5.4 Secondary contributions

This section presents a basic consideration of four secondary contributions of my research.

7.5.4.1 To assessment and learning in Outcomes-Based Education

Of the secondary outcomes, I would suggest that the application of MIBADL in OBE is arguably the most significant, regardless of the level of learning. As I argued earlier in my research, one of the great challenges faced by OBE is that of the intrusive and unintended outcome linked to the form of assessment, generally limited to reading and writing forms. The focus of OBE on the demonstration of knowledge, ability, competence or proficiency (B. Malan, 1997:30), together with the concern of assessment to evaluate what is essential (Spady, 1994:24), makes MIBADL a viable alternative. The development of MIBADL both contributes to assessment in OBE, and addresses the challenge of the secondary outcome linked to the ability to read and write. In the event that MIBADL is utilized, the learner is able to select a form of assessment that they are more comfortable with; therefore, being better able to focus on the stated outcome or outcomes. By means of this process, the assessment of the learner's mastery of the intended outcome is less encumbered by the form or type of assessment, and becomes more outcome focused (S.P.T. Malan, 2000:26 and Maskew Miller Longman, 2001:15). Therefore, I contend that this study has contributed to Outcomes-Based Education by submitting a construct for the assessment of learning that will enable the mastery of the intended outcome or outcomes to be less influenced by the form of assessment, while giving more consideration to the differences between learners.

7.5.4.2 To assessment and learning in Christian higher education

Since an important aim in much Christian higher education is to equip and train people for Christian ministry and service, MIBADL offers the possibility of merging academic demands with the challenges of real-life ministry and service, as learners are better enabled to focus on the development of both knowledge and skills. This is particularly so because MIBADL opens up additional options for authentic assessment, which is valuable in any vocational higher education. The response received from many learners (see chapter six) indicated that this was indeed the case. For example, one student commented on their appreciation of the manner in which one of their chosen assessment items enabled them to draw together the College's academic demands and the type of Christian ministry they anticipated entering into. Therefore, I contend that this study has contributed to an understanding of the assessment of learning and the promotion of deep learning in Christian higher education by presenting an approach to the assessment of learning that not only promotes deep learning, but also enables further authentic assessment and the recognition of the relational aspect of the learner, which play a vital role in the educating of people for Christian ministry and service.

7.5.4.3 To assessment and learning in higher education

While the specific application of my research was to Christian higher education, my intentional choice of a traditionally academic course for the application of MIBADL has demonstrated that it has potential for application in the broader higher education sector. While this may encounter challenges, I am convinced that at least the exploration of the potential of MIBADL in future is worth serious consideration. I would propose that MIBADL can present meaningful possibilities for the assessment of learning in all higher education. Therefore, I contend that this study has contributed to an understanding of the assessment of learning and the promotion of deep learning in higher education in the development of MIBADL that may have a valuable contribution to make to the assessment of learning in all higher education.

7.5.4.4 To assessment and learning in education in general

As much as I have made a contribution to higher education, I would argue that everything that I have developed and proposed has potential in all education. I would argue that MIBADL (or any derivative thereof) could be applied in any sector of education. As an example, when assessing children with either mental or physical handicaps, assessment that does not automatically demand the ability to read and write could well open up tremendous opportunities for the future learning of such learners. I would suggest that the exceptions made in the present could become the norms for the future. Therefore, I contend that this study has contributed in that my research has submitted proposals for the assessment of learning that could be utilized in future consideration of and explorations into the assessment of learning and the application of theories of multiple intelligences in all educational settings.

7.5.5 To my own practice

As this study was an action research project, it is also necessary to reflect on the contribution of this study to my own practice. While the theoretical contribution of this study is apparent in this thesis, there are three areas of notable contribution to my own educational practice. The first relates to a greater awareness of the differences between learners. While I have always been conscious of the differences between learners, theories of multiple intelligences have deepened that awareness by enhancing an appreciation of the context of or grounds for those differences. It became apparent to me, during this research, that many of the differences between the learners that I was aware of were of a biographical or descriptive nature. Theories of multiple intelligences and their use in my research have helped me to be more aware of the personal or subjective differences between learners.

Secondly, the application of theories of multiple intelligences to the assessment of learning has alerted me to the value of different approaches to assessment. As I explained in chapter one, I commenced my own educational practice as I had experienced higher education as a learner myself. Through my earlier years of

lecturing, I had begun to make certain changes; however, this research not only gave an opportunity for more intentional development of my approach to assessment, it has also compelled me to take a broader look at the assessment and its application in my educational practice.

Finally, while I may not always make use of MIBADL as proposed, I have subsequently endeavoured to introduce variety and choice into my educational practice. This has been valuable both in enhancing the experience of assessment of many of the learners I work with, and also in broadening the scope of assessment that I may utilize in the assessment of course objectives and outcomes. It does, however, remain a challenge to apply aspects of MIBADL in the context of higher education, which all too often does not value new concepts and different approaches to education.

7.6 RESEARCH LIMITATIONS

Reflecting on my completed research, I would identify three main limitations. The first limitation was that associated with the requirements of the Higher Education Quality Committee, which meant that I was unable to make changes to the assessment items during the empirical research period (see 6.2.1, Developing the assessment items). This meant that none of the assessment items could be altered or changed during the semester, even if it would have been advantageous to my research. In terms of action research, this meant it was not possible to work with research spirals between assessment items, and that all the assessment items fell into one research spiral.

The second limitation of my research lay in the fact that it was very difficult to make judgements with regard to the full extent to which learners were adopting deep learning approaches. I would argue that there were two main contributing factors; firstly, that the data collection from the learners was in the form of questionnaires and interviews. While such data collection methods are valuable, they were impacted by the second contributing factor, that the learners did not have intentional deep learning *language*. This meant that, as researcher, I was required to interpret the language used in the questionnaires and interviews, which

might have been impacted upon one of two ways: I could have been influenced by researcher bias and *read into* the language of the learners, or I could have been too cautious in the interpretation and found too little in their responses. While I have endeavoured to avoid both, the nature of research is such that it might have occurred, without knowing how the interpretation of the language was biased.

The third limitation of my research was associated with the problem identified by the learners and reported on in 6.3.7.2, Concerns regarding technical requirements. It became apparent to me early in the research that many, if not all, of the learners felt that this was the biggest single negative aspect of the research. While I felt that the assessment criteria were adequate in this regard, it became clear that the learners did not. I chose not to make any changes in this regard, because it was my interpretation that it would unfairly impact on the learners and the assessment items already completed. In retrospect, this was probably an error on my part and may have had a negative impact on the research findings. However, I would argue that the impact was of such a nature that it did not severely impact on my empirical and research findings; rather, a change might have strengthened the findings.

7.7 SUGGESTIONS FOR FURTHER RESEARCH

The final aspect of the way ahead is to pay basic attention to the areas for future research. As I have already indicated in the preceding sections, there are opportunities for future research in the following areas:

1. The development of technical guidelines for non-traditional assessment items;
2. Examination of the application of MIBA and MIBADL, particularly in relation to increased flexibility in the assessment of learning;
3. The challenges and opportunities for MIBA and MIBADL in higher education and different fields of study;
4. The application of MIBA and MIBADL in the varied and varying contexts and settings of general education;

5. Further research into the application of MIBA and MIBADL in Christian education, developing and extending my research;
6. Consideration of the impact of MIBA and MIBADL on the evaluation of learners in OBE.

Additional potential areas for future research may be varied; however, I would suggest that there might be scope for research into the application and value of MIBA and MIBADL in special education settings. In these terms, I would suggest that MIBA and MIBADL might have great value in remedial settings; especially where learners are struggling with medical conditions that could include ADD, ADHD, Asperger's and autism. Another setting where MIBA and MIBADL may be of great value is that of vocational training, where the emphasis is on the ability to do rather than the need to know. Parallel to this are the many settings in which businesses and companies may need to evaluate employees and staff for their ability in and suitability for a particular position in the given business or company.

7.8 CONCLUSION

My conclusion with respect to my research is:

1. Multiple Intelligences Based Assessment for Deep Learning (MIBADL) contributes to the promotion of deep learning.
2. The principles of Multiple Intelligences Based Assessment (MIBA) are valuable to the assessment of learning.
3. A consideration of theories of multiple intelligences can contribute to enhanced assessment practices.

Overall, I would propose that my research has made a valuable contribution to the development of educational practice and theory, while pointing to areas of significant research for the future.

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APPENDIX A:

INITIAL QUESTIONNAIRE

INITIAL QUESTIONNAIRE

1. Full name:
2. Age:
3. Race (mark the appropriate option):
   - □ Black
   - □ Coloured
   - □ Indian
   - □ White
   - □ Other (specify)
4. Nationality:
5. Home language (the language spoken in your home):
6. First language (the language you are most proficient in):
7. English is my (mark the appropriate option):
   - □ 1st language
   - □ 2nd language
   - □ 3rd language
   - □ 4th language
   - □ 5th language
8. Highest level of schooling:
9. Highest tertiary (post-schooling, college or university) qualification:
10. Field of study (if applicable):
11. Other qualifications:
12. How did you feel when I introduced the *BBS 225, The Pentateuch* course (mark any options that applies)?
    - □ Confused
    - □ Uncertain
    - □ Positive
    - □ Challenged
    - □ Afraid

- Nothing different
- Apprehensive
- Excited
- Anything else:

13. If you wish to say anything more about how you felt, please write it here.
14. Having had the opportunity to provisionally select your assessment options, describe how you felt about the opportunity to choose from a wider range of options.
15. Are there any other comments you would like to make at this stage of the course? Please discuss these in the space provided.

Thank-you for taking the time to complete this questionnaire.

APPENDIX B:

REQUIREMENT 1-4 QUESTIONNAIRE

REQUIREMENT 1-4 QUESTIONNAIRE

1. Name:
2. Which of the requirement options did you complete (see next page for full descriptions)?
   - [A list of the four options under each requirement, listed by means of a brief description]
3. Why did you choose the option that you completed?
4. Describe how you experienced of the option.
   - Very difficult
   - Difficult
   - Average
   - Easy
   - Very easy
5. Explain why you experienced the option as indicated.
6. Explain why you did not choose one of the other options.
7. What changes would you make to the options, if any?

Thank-you for taking the time to complete this questionnaire.

APPENDIX C:
FINAL QUESTIONNAIRE

FINAL QUESTIONNAIRE

1. Full name:
2. In the space provided below, kindly reflect on your experiences of the course, with particular reference to the approach to assessment.

Thank-you for taking the time to complete this questionnaire.

APPENDIX D:
LEARNER RESPONSES TO THE INITIAL QUESTIONNAIRE

NOTE:

This appendix only includes the learner responses to questions 13-15, as the responses in questions 2-11 are presented in chapter five and the responses to question 12 in chapter six.

13. If you wish to say anything more about how you felt, please write it here.

- "I was ready to learn more on the subject."
- No comment.
- "I still want to get the mode of understanding."
- "It was good to have the options, some looked really interesting, if I was gifted in the offered alternative areas I would have jumped at the chance to take such options."
- No comment.
- No comment.
- No comment.
- "I felt challenged to try a different style of *communication* but at the same time I felt way to apprehensive to try anything too different."
- "At first it is difficult to perceive of education in this manner (esp tertiary education) but I will enjoy seek to explain academic principles through artistic mediums."
- "I felt that the workload was not for our benefit, but to see what people like to do."
- No comment.
- "Was not sure how the marking would work."
- "That I am not writing a final exam become relieving, even though I don't mind exams, but the options has help me concentrate more and be more reflective."
- "I felt maybe this will create problem for me and later was proven wrong."

- "I see many challenges for me in this course but I hope that I will make it."
- "There was a little apprehension because it is a new way of assessment and there is some uncertainty that comes with that. However, on the whole I was excited as it broadens that horizon, gives new opportunity and presents another challenge and way of expression and learning."
- No comment.
- "I think this course could work. I would reassess it at the end of the semester to see how much I learned."
- No comment.
- No comment.

14. Having had the opportunity to provisionally select your assessment options, describe how you felt about the opportunity to choose from a wider range of options.

- "I first felt fearful, without looking at the options, of not finding the option I would be comfortable with."
- "A bit anxious as I wanted to pick something that I would be able to do well in not necessarily what I would enjoy doing the most."
- "I feel comfortable for I have chosen what I like."
- "Great. I can't believe I can choose 2 write exams tho [sic]!"
- "Freedom."
- "I felt excited and good as this will widen my knowledge."
- "I was very happy/excited about the different options. I felt that I was given the freedom to express myself in various ways.
- "It is good in the sense that I have the option to express myself better, or that I can engade [sic] the subject on a deeper level."
- "I think the other mediums are interesting but will take more effort to use because you cannot always understand the *technical* requirements of it whereas a academic paper you understand the requirements because you have done so many."
- "It was hard, I had to change 4 times for the technical requirement is not understandable for me."

- "The nice thing about been able to work in visual areas where I'm stronger naturally. I had a strange sense of freedom and feel I now have the opportunity to excel."
- "Happy as I am not an academic and was encouraged to see value in my creative side."
- "Its just remarkably different, and seems to be easy. But I would not know ho it will be if it happens across all the courses. Taken each requirement from each section is just fantastic, so I can write a tests on one section and that is it."
- "It gives me peace to know that I have great options where I can choose what best soothe my learning process."
- "I felt that it was very good and giving us enough chance to make a choice of our own and I think I will make it although it is challenging."
- "Same as above." - "There was a little apprehension because it is a new way of assessment and there is some uncertainty that comes with that. However, on the whole I was excited as it broadens that horizon, gives new opportunity and presents another challenge and way of expression and learning."
- "I felt that the new assessment gives an opportunity for those who are not academically inclined to do well for the course. I think that the old requirements favored those who are academic."
- "I felt an increased responsibility upon myself, yet was confident that I would do fine/well regardless."
- "I was very please to have a wide range of assignments to choose from, It's giving me the opportunity to do something different."
- "I was excited by the fact that I could choose options that would challenge me in new ways, not just theoretically but creatively.

15. Are there any other comments you would like to make at this stage of the course? Please discuss these in the space provided.

- "I found the course interesting, informative and challenging."
- "In discussion with classmates it is so interesting seeing the diversity in what we have chosen to do in our requirements. It gives us the

opportunity to be more who we are in the work we have to do. What an opportunity!"

- At the moment no. Maybe as time goes on I would have some comments.
- "Its good to make us think in different ways. I appreciate the opportunity."
- "It'll help to have the notes on authorship so that it is to follow the lecture."
- No comment.
- No comment.
- "N/A."
- "I think it is of great value and the more people view education like this, the more they will be able to express there findings in different mediums allowing for a greater depth of learning to a wider variety of people and personality types."
- "For me the diriving [sic] from material used & personal comments & discussions is relavent [sic], but is going into theological areas that has nothing to do with the subject. … do material."
- "This opportunity allows people who struggle with language & accedemic [sic] disabilities (such as ADD, ADHD and others) to have ma medium to excel."
- "The level of effort put into making a poster is different to the effort put into a sermon. Im [sic] not sure how the marking to work."
- "I feel given student options to choose from just open the students to creativity and somehow puts the course in better perspective. I'm loving it. Thank you.
- "The indepth [sic] of the study is quite interesting and the explanation of concepts thrill me, and I feel that at the end the students will be better for it."
- No comment.
- "I believe it is a step in the right direction and though it will open up a whole new world of interesting dynamics, I believe it holds within it the potential for greater learning and equipping for committed disciples of our Lord."

- No comment.
- “I appreciate this, especially for students who do not have the academic background I necessarily have.”
- “Thus far I am enjoying the course and look forward to learning more.”
- No comment.

APPENDIX E:
REQUIREMENT 1 – ASSESSMENT ITEMS

Requirement 1: Background issues

Course outcome:

Discuss the nature of authorship and oral tradition in ancient times, together with their impact on the study of the Old Testament.

Requirement options:

Select and complete ***one*** of the following options:

1. Write an assignment (1200-1500 words) that explains the nature of authorship and oral traditions in ancient times, demonstrating how these impact on the study of the Old Testament. Use a bibliography of no less than four meaningful references.

2. Write a story (800-1500 words) that will explain how authorship and oral tradition in ancient times impacts on the study of the Old Testament. Your submission should clearly indicate the age of the intended reader, and must not include quotes. However, your sources should be listed in a bibliography, of no less than four meaningful references, at the end of the story.

3. Prepare a chapter (800-1500 words) for a book that explains the nature of authorship and oral tradition in ancient times, including an explanation of how these impact on the study of the Old Testament. The use of diagrams and illustrations is encouraged, with references as required.

4. As the relevant material is taught in lectures, keep a journal that records your growing understanding of authorship and oral tradition in ancient times, how you respond to the implications, and what your own conclusions

are. The journal should be no less than twelve A5 pages or six A4 pages, and may be in your own handwriting.

Assessment criteria:

In completion of this requirement, the learner should ensure that they:

1. Properly respond to the assessment item as presented.
2. Meaningfully utilize the medium of presentation required, including technical demands.
3. Reflect a clear understanding of both authorship and oral tradition in ancient times.
4. Demonstrate an understanding of the impact of authorship and oral tradition in ancient times on the study of the Old Testament.
5. Apply the content in a manner that reflects an understanding of the implications of what has been proposed.

APPENDIX F:
LEARNER RESPONSES TO THE REQUIREMENT 1 QUESTIONNAIRE

NOTE:

The sub-headings under each question indicate which option the learner had completed.

2. Which of the requirement options did you complete (see next page for full descriptions)?

- **A written assignment** 10
- **A written story** 1
- **A book chapter** 2
- **A personal journal** 7

3. Why did you choose the option that you completed?

Written assignment

- "I had confidence in this one because I had to study books to find information and I again had done assignments before in a written way, so I thought this would be easy way for me to write an assignment."
- "Because it was more familiar to me than the others."
- "I originally chose this because it is the easiest way to put down my research. I changed to do the story but found it hard to give all the relevant info."
- "Because I felt I could get more marks with it and not too confident of the other options."
- "Because I am so familiar with it, but no because it was easy."
- "Because of time constraint, I opted for something I knew how to do."
- "I love writing assignments because I am used to them."
- "It is how I've become accustomed to systematizing my thoughts into an assignment."
- "I chose that option because it appealed to me most and was something that I am familiar with doing."

- "I felt that it would be the most beneficial in terms of research and application."

Written story

- I want to grow in my creative abilities as a means of ministry. I had a moment of inspiration."

Book chapter

- "… it is a life ambition to write a book."
- "It fitted more my structured view on the work. It also called for a more practical and straight forward approach."

Personal journal

- "It was challenging to me to sit listen to lectures and later interact with the lecture. It calls for good concentration."
- "I choose the other option because it enables me to be more personal and reflective. I wouldn't have mind the written assignment, but I love the journal for a change."
- "I felt I would get better marks for this option."
- "I could not choose 4 assignments from the same section, therefore this was the easiest alternative option to complete."
- "The option required a grasping of the concept as opposed to right wording and references. It allowed for work to take place during class with some reflecting at home which meant emphasis was on understanding concepts as opposed to reproducing work from other books."
- "Something different to doing an assignment. Enjoy journaling."
- "It was something different to the classic *assignment* which was nice and something more experiential than academic which I see as a strength in myself."

4. Describe how you experienced of the option.

- **Very difficult** 0
- **Difficult** 8

- **Average** 8
- **Easy** 4
- **Very easy** 0

5. Explain why you experienced the option as indicated.

Written assignment

- Difficult, “Because I could not find many books peaking on authorship and oral tradition as I needed.”
- Easy, “It was clearly outlined to work with.”
- Difficult, “It was hard to choose an option as most I have never done it that way before and did not know how to do the others.”
- Average, “I experienced the option because I don’t want to pretend that I know the technicalities required by the lecturer.”
- Difficult, “To find out about all the different sources and type of information , and the question of impact of the oral tradition in the study of the Old Testament was difficult for me.”
- Difficult, “It is not so much the option but the question, I find that I’m just struggling to get into it.”
- Easy, “I am used to it and I enjoy doing research.”
- Easy, “My mind follows that pattern fairly easily.”
- Average, “Because it required of me to put in the usual amount of work and to research that I have done in previous assignments.”
- Difficult, “There is not much written with specific reference to oral tradition so the research was longer and more difficult.”

Written story

- Difficult, “The moment of inspiration was great but the fleshing out of the product involved some challenge.”

Book chapter

- Difficult, “… there is no layout given how to do it.”
- Average, “It was hard to simplify the view that I have on the topic. It’s a complicated subject that is easy to get lost in.”

Personal journal

- Difficult, “Expressing my personal grasp of the lecture.”
- Easy, “It was a personal reflection, availing me the opportunity of been less academic and more practical. I also find it easy to retain what I have written.”
- Average, “It wasn’t difficult; I just needed to listen in class and reflect on the topic. Drawing my conclusions in this medium posed a bit of a challenge for me.”
- Average, “It was difficult to fulfill [sic] the technical requirements especially trying to conclude the journal. It’s still an assignment, but by nature very informal.”
- Difficult, “The requirement asked for one to show a development in one’s understanding but sometimes the concept and implications were grasped quite quickly and so it was difficult to show development. The temptation to slip back into academic writing is always there.”
- Average, “It was a bit weird journaling on class notes → I felt a bit bound / had tight perimeters. But I enjoy journaling so it was okay to get through.”
- Average, “It was not so academically challenging, but due to the difference in structure it was not easy to determine exactly what was wanted, you had to ask yourself if you had covered everything how the lecturer wanted it.”

6. Explain why you did not choose one of the other options.

Written assignment

- “I thought I could struggle to write and make the format and structure of my assignment.”
- “I was not too familiar with them.”
- “… no experience of doing the others.”
- “Reason is because there are enough books on the topic in the library which to be is supposed to make it easy for me.”
- “I was afraid not knowing if it is going to be marked, it is not that they were very difficult.”

- “Initially I thought to do the journal because I thought that it was the easiest of the options. But then got scared it was too simple and that I would have to probably [work] harder to secure a good mark.”
- “What I have chosen I like most.”
- “With personal journal, I would not have been disciplined enough to daily put don thoughts without an idea of conclusion. The rest, I haven’t been feeling too creative lately.”
- “They did not interest me as much, I though I could get the most marks from the option I chose.”
- “It was a tossup between the story and the written assignment. A story I felt would have been more time consuming.”

Written story

- “I was not confident that I knew what was needed to successfully complete the journal.”

Book chapter

- “[They are] normal to what we do at college.”
- “The other options were dull or too abstract for me.”

Personal journal

- “Were not as challenging as the one I chose.”
- “I would not have mind the written assignment.”
- “I didn’t want to write the assignment cause its bin (sic) done before. I wanted to try something new. The other options looked a bit risky for me.”
- “I am not the creative type of person able to write stories etc.”
- “In doing an assignments, I find the technical language etc is secondary to the concepts and the concepts have more impact on one’s thinking. I thought the journal was more concerned with the grasping of the concepts as opposed to referencing etc.”
- “Didn’t feel inspired to write a story. Felt the two other options were too typical for college assignments.”

- “Such as the story, it seemed to be a really nice option, but was unsure how to effectively produce the required material in such a format.”

7. What changes would you make to the options, if any?

Written assignment

- “I could not make changes.”
- “N/A.”
- [No comment]
- “I would have chosen a personal journal if I were to make options.”
- “No.”
- “I would seriously consider giving more time to complete the requirements, especially those that involve some kind of artistic work.”
- “Maybe I would go for journal next time.”
- [No comment]
- “There are none I can think of.”
- “I loved the options but it was difficult to decide which one to choose. That was my biggest struggle.”

Written story

- “None.”

Book chapter

- “None.”
- “Nothing they were diverse enough to cover all preferences.”

Personal journal

- “None.”
- “I feel its [sic] proper as it is. But I can give a proper response after I have gotten my marks.”
- “Not really.”
- “No changes.”

- “None, the only thing is that I was unsure as to all the technical requirements as I had never had a journal marked or critiqued and so I would become more comfortable with it as I understood better the finer details that are expected.”
- “I would not make any changes.”
- “None.”

APPENDIX G:
REQUIREMENT 2 – ASSESSMENT ITEMS

Requirement 2: Introductory considerations

Course outcome:

Demonstrate an ability to examine the key introductory considerations of the Pentateuch, as a whole and with reference to its constituent books.

Requirement options:

Select and complete ***one*** of the following options:

1. Study for and write a one-hour test that will evaluate the ability to examine the key introductory considerations of the Pentateuch, as a whole and with reference to its constituent books. The test will be written on the due date indicated below.

2. Choose one of the books of the Pentateuch and prepare a chapter for a children's book – using illustrations and text – that introduces the book in terms of name, author, outline, contents and theology. The submission should indicate the intended age of the readers (not exceeding age sixteen), and must list no less than four meaningful references (although quotes and references in the text are not required).

3. Prepare a poster that presents one of the books of the Pentateuch in terms of name, author, outline, contents and theology. The poster should be at least A2 in size, and creativity is strongly encouraged. A small block on the poster should list no less than four meaningful references (although quotes and references in the text are not required).

4. In the context of a Bible Study or similar group, present a study that explores one of the books of the Pentateuch in terms of name, author,

outline, contents and theology. As part of the study, allow the group to respond to and interact with you, around what they are studying. The submission should be a mini portfolio including a copy of your study notes, any handouts, and a 600-800 words personal reflection on the experience and interaction.

Assessment criteria:

In completion of this requirement, the learner should ensure that they:

1. Properly respond to the assessment item as presented.
2. Meaningfully utilize the medium of presentation required, including technical demands.
3. Reflect an awareness of the key introductory considerations of the Pentateuch and its constituent books.
4. Are aware of options, where applicable, and are able to draw reasonable conclusions where necessary.
5. Systematically present the material, ensuring that all key issues are included.

APPENDIX H:

LEARNER RESPONSES TO THE REQUIREMENT 2 QUESTIONNAIRE

NOTE:

The sub-headings under each question indicate which option the learner had completed.

2. Which of the requirement options did you complete (see next page for full descriptions)?

- **A one-hour test** 10
- **A book chapter** 3
- **A poster** 6
- **A Bible Study** 1

3. Why did you choose the option that you completed?

One-hour test

- "Honestly, it required the shorter amount of prep time."
- "It seemed the most sensible to choose."
- "Because I had 3 assignments due and a test takes less time to prepare for than an assignment."
- "Because I enjoyed to be assessed in terms of knowledge and I thought it would be easy for me."
- "Felt that it would be the requirement I would do the best out of the options available."
- "It seemed to be the most logical based on the content."
- "I feel more comfortable with the test, moreover the other two options will take me a large time. And the Bible study well …"
- "Because I think I should be able to answer the questions like the research which I may not really know what."
- "I figure it will be easier to write a test – I mean at the time spent studying is for less than writing a normal assignment."

- "A book chapter and poster would not have been wrong choice for the way I function. The Bible Study – I was concerned that I would be really teaching people who knew more than I – that's difficult."

Book chapter

- "For me it was the one which I was familiar to, I was not prepared for the others."
- "Because I would research more information from other books and study the book more."
- "I love to research and write down what I have discovered."

Poster

- "I thought it would be the best option in which I could express the work."
- "It gave me an opportunity to explore a more creative way of doing my assignment."
- "Learning to do something completely new to me."
- "It is in the area of my expertise, I have the resources and I appreciated the opportunity to express my learning in this way."
- "It was very appealing to me as I could make use of some of the creative talents I have. It also seemed like a refreshing change."
- "I felt that I would be able to best utilize my talents."

Bible Study

- My ability to write tests has took me to something different."

4. Describe how you experienced of the option.

- **Very difficult** 1
- **Difficult** 6
- **Average** 10
- **Easy** 2
- **Very easy** 1

5. Explain why you experienced the option as indicated.

One-hour test

- Average, “Study has become part of … studying, so I’m used to it.”
- Average, “The test was logical. It was not too difficult but instead if one had studied one’s work there would be no problem in answering any of the questions.”
- Difficult, “I did not always understand the argument of the authorship for the Pentateuch or why they were important, felt at times it got quite tedious.”
- Average, “It was actually easy but lack of proper preparation made it average for me.”
- Average, “It was a good test but I did not find it difficult as I had studied my course material.”
- Difficult, “The amount of detail of each book made it hard … to locate key points.”
- Very easy, “This subject I love and also have studied for.”
- Average, “The issue is that with careful study of the course material no difficult thing is asked.”
- Easy, “Studied like a trooper.”
- Difficult, “I am not *strong* at exams [tests].”

Book chapter

- Average, “I have experienced that I have missed some points after I have submitted, i.e. that is to add some pictures, for illustrations.”
- Average, “Because after reading other books which give different informations [sic] it becomes difficult to come to one conclusion.”
- Average, “We are so used to do our assignment academically. This was a challenge to me.”

Poster

- Difficult, “I didn’t have the computer program and needed to work at a friend’s house, and it is a lot of info to put on a poster.”

- Difficult, “Because the option is relatively new, it was difficult to keep the technical demands in mind.”
- Difficult, “I’m not an artist.”
- Average, “I am experienced in this kind of task so it makes it easier, however creative expression is always a challenge.”
- Average, “I found that it was not more difficult that a traditional assignment nor more easier. I was actually motivated to put in a lot of effort as I had the freedom of being creative.”
- Easy, “I enjoy doing computer design and basic graphics. Finding some of the info and summarizing it was a little difficult.”

Bible Study

- Very difficult, “I always used other peoples and this is my first.”

6. Explain why you did not choose one of the other options.

One-hour test

- “I knew I would do well in the tests with some less time used for preparation.”
- “I do not feel I have creative abilities in visual art.”
- “Did not desire to make a poster or bible study and a test was easier than a book chapter.”
- “Because I feel at ease with the test type of question … pushes me to be certain and to know better what I must.”
- “I felt this was the best option for me to excell [sic].”
- “Variety.”
- “Will not have enough time to really do them well, moreover I feel more comfortable with the test.”
- “Why I didn’t choose the other options is because I have not been doing well as I expect in other assignment that deal with referencing.”
- “Time, time …”
- “A book chapter and poster would not have been wrong choice for the way I function. The Bible Study – I was concerned that I would be really teaching people who knew more than I – that’s difficult.”

Book chapter

- "Because it seems to be much easy, but I find out while I was writing."
- "It is just because I feel more relaxed when I research and write an assignment."
- "I love to research and write down what I have discovered."

Poster

- "I was interested to try something different, and I'm bad at tests."
- "The exam [test] looked very daunting and the other two not at all exciting."
- "I would have for the 2nd option [book chapter] as well, but this one took me in another sphere of learning."
- "I didn't feel like writing an exam and to be honest I felt that to do the poster would be less stressful and time-consuming."
- "This option really stuck out to me immediately. I thought it would give me different challenges."
- "I felt this was the best one for me."

Bible Study

- "Time."

7. What changes would you make to the options, if any?

One-hour test

- "It all seems fair enough options."
- "None. There is an option for most fields of thought."
- "None."
- "Not much."
- "I would not make any changes."
- "I think the information that is tested on should be more structured and two the point."
- "It is very OK, but the time given to answer the questions seems too short (my opinion)."
- "I would have chosen Bible Study which is close to the test in simplicity."

- “None.”
- “Something for a more task orientated individual? i.e. less creatively gifted.”

Book chapter

- “The question was not clear enough by saying illustrate instead of saying adding some pictures to illustrate, i.e. to make the question more clear.”
- “No changes.”
- “None.”

Poster

- “More stringent guidelines on what was needed.”
- “Not anything really.”
- No comment.
- “None that I can think of offhand. Although possibly a short explanation to accompany the poster would be useful.”
- “I can’t think of any.”
- “An example of what you are looking for would be helpful.”

Bible Study

- “None.”

APPENDIX I:
REQUIREMENT 3 – ASSESSMENT ITEMS

Requirement 3: Theological themes

Course outcome:

Discuss the theological theme of the Pentateuch as a whole, as well as the themes of its constituent books.

Requirement options:

Select and complete ***one*** of the following options:

1. Study for and write a one-hour test that will evaluate an understanding of the theological themes of the Pentateuch as a whole, as well as the themes of its constituent books. The test will be written on the due date indicated below.

2. Utilizing an artistic medium (art, music or drama), reflect the theological theme of the Pentateuch. The final submission should be an artwork, musical score and recorded version, or a dramatic script of dimensions and/or length of choice.

3. Write a set of notes for a study guide that will systematically work through the text of the Pentateuch, with the aim of helping the user to discover the theme of the Pentateuch and the themes of its constituent books. The length should be appropriate to the notes, and a bibliography is not required.

4. Teach the theme of the Pentateuch and the themes of the constituent books to an individual on a one-on-one basis. While doing so, allow the person to interact with you on the significance of the themes for their own lives. In no less than 600 words reflect on the experience in terms of who

the person was, how you carried out the task, how the person responded, and your interaction with them.

Assessment criteria:

In completion of this requirement, the learner should ensure that they:

1. Properly respond to the assessment item as presented.
2. Meaningfully utilize the medium of presentation required, including technical demands.
3. Reflect on the key dimensions of the theological theme of the Pentateuch.
4. Where applicable, demonstrate an awareness of the themes of the constituent books of the Pentateuch.
5. Appropriately relate the theme and/or themes to the biblical text; except where inappropriate in option 2.

APPENDIX J:

LEARNER RESPONSES TO THE REQUIREMENT 3 QUESTIONNAIRE

NOTE:

The sub-headings under each question indicate which option the learner had completed.

SPECIAL NOTE:

At this point one learner withdrew from the course because of external pressures; therefore, the number of learners reduced to nineteen.

2. Which of the requirement options did you complete (see next page for full descriptions)?

- **A one-hour test** 7
- **An artistic medium** 8
- **Study guide notes** 2
- **One-on-one interaction** 2

3. Why did you choose the option that you completed?

One-hour test

- "I felt it would take less time to prepare for this option, and I feel I did not want to make a study guide."
- "I thought it to be easy."
- "I thought it would be less work in showing that I understand the subject."
- "Can't paint well, not sure of the markings for poetry. Test becomes a not to bad option."
- "Because I struggled with the expectation mostly technical points."
- "I have chosen it because I suspected that it will be better for me. And it will save time than to read and write assignment."
- "I am not artistic! I was not sure I was ready. I understood enough to make good study notes and finally one-to-one interaction was difficult to

find the time with a person who genuinely wanted to engage in such a way."

Artistic medium

- Painting, "I wanted to take advantage of the opportunity to submit a more creative assignment."
- Painting, "Because I enjoy art and being creative."
- Painting, "Felt that God wanted me to do this assignment to rely on Him and use an old gift that I have not used in quite a while."
- Painting, "I chose the artistic medium because it allows me to use some of my artistic abilities instead of the normal academic approach."
- Drama, "Doing something new was challenging to me. I've had to be creative."
- Computer-based, "To try something new."
- Computer-generated "I had an idea that could easily be transferred onto a picture."
- Song, "I knew it would be a challenge for several reasons, so I opted to not do the *easiest* option this time."

Study guide notes

- "It could give me time to study more."
- "I feel that I have made the right choice because this is what I like and enjoy doing."

One-on-one interaction

- "The other options looked a bit harder for one. The fourth option looked straight forward and encouraged me to develop my teaching skills."
- "I did the artistic medium and had paint spill on it and had to redo the requirement on Saturday for I had no time to redo the painting."

4. Describe how you experienced of the option.

- **Very difficult** 1
- **Difficult** 8
- **Average** 7

- **Easy** 3
- **Very easy** 0

5. Explain why you experienced the option as indicated.

One-hour test

- Difficult, “I had poor planning in preparation for test day.”
- Difficult, “Lack of proper preparation.”
- Difficult, “I didn’t know how indepth [sic] the questioning would be.”
- Average, “Seems the time was not enough, and was not sure of the sort of indepth [sic] that is required.”
- Easy, “Because it affords me opportunity to choose the clear option that give me understanding of the course.”
- Average, “It was not so difficult but it is not easy sometimes to recall everything within one hour, but demands a lot of reading and memorising.”
- Difficult, “I am not strong in exams.”

Artistic medium

- Average, “To produce something creative is always a challenge and to think of a concept and way of expressing it can be difficult. Also, I have not sufficiently painted for a while so I needed to get some *skills* back.”
- Easy, “Because I came with a concept for my artwork quite easily and enjoyed expressing it.”
- Difficult, “Going into imaginations and finding the vocabulary to fit in.”
- Difficult, “To communicate enough, but not get lost in communicating too much.”
- Average, “I enjoyed the experienced. I was nervous to paint again but I trusted God had given me the picture and so I enjoyed the experience.”
- Difficult, “I really enjoyed it. I think it was just such a great way of completing an assignment.”
- Difficult, “It was fairly difficult putting the theme to words in a contemporary manner, once I had that, the rest of the song came fairly easily; just needed a fair amount of time for the recording of it.”

- Easy, “I had an idea and was able to work with it easily.”

Study guide notes

- Average, “I was struggling with question. It seemed tricky to me that I could not know how best to tackle it.”
- Average, “I did not have enough time to do it.”

One-on-one interaction

- Average, “It is a very new way of doing an assignment and I therefore did not really know what to do at first or what to expect.”
- Very difficult, “For it was the 1st time I done it with my family.”

6. Explain why you did not choose one of the other options.

One-hour test

- “I did not feel it possible to write a song on the themes of the Pentateuch.”
- “They looked as requiring a lot of work.”
- “I wanted to make a short film but I didn’t have the time.”
- “Can’t paint well, not sure of the markings for poetry. Test becomes a not to bad option.”
- “The reason is I didn’t ask the lecturer for explanation of words that bother me on time, so I was comfortable with the test.”
- “Because they need lot of time to be prepared for them.”
- “I still felt this would be my strongest option [despite not being strong in exams].”

Artistic medium

- “I just felt more inclined towards the artistic work.”
- “This option appealed the most to me, I felt I could benefit most by doing this option.”
- Just chose something new.”
- “They did not appeal to me.”

- "I was going to do the test but when I was in class God inspired me with the picture so I was certain about doing this one and thus I didn't think of doing the others."
- "I just wanted to paint so bad that I didn't even consider the other option."
- "I chose the test last time. I had no real interest in the others."
- "The artistic medium was the one I felt would be easiest and work with my ideas."

Study guide notes

- "Because I am more used to study and research information and then write an assignment."
- "I hope I am now familiar with the option."

One-on-one interaction

- "I'm not artistic to do option 2. Option one is too safe, I wanted to try something new. Option 3 was a consideration, but option 4 was a little more appealing."
- "I did and had the mishaps."

7. What changes would you make to the options, if any?

One-hour test

- "No changes, I feel there were adequate options to cater for different abilities."
- "I'll go for the study guide notes because of my wanting to teach."
- No comment.
- "Exams is always a good thing for me. Especially when one is well prepared."
- "I would have loved to do the teaching aspect that can me dig into the Book of Genesis to enhance my teaching skill."
- "No changes to this option but every lies with the learner to prepare himself enough, and be prepared for the test."
- None.

Artistic medium

- “Perhaps a short explanation of artwork submitted.”
- “None I can think of.”
- No comment.
- “None, but possibly a more detailed outline of what is expected.”
- “The only consideration that comes to mind is the fact that people may have to choose an option they can financially afford – if someone wants to paint but cannot afford the paints.”
- “No change at all except that I would ask the lecturer to somehow consider that some of the options may be a bit costly to complete than others.”
- No comment.
- “If done on computer hand in on a disk or flash disk as R100 to print is quite a bit.”

Study guide notes

- “No changes.”
- “I would maybe go for option 4.”

One-on-one interaction

- “No changes really.”
- “I would like to see the test to be changed to some other form of expression.”

APPENDIX K:
REQUIREMENT 4 – ASSESSMENT ITEMS

Requirement 4: Textual exegesis

Course outcome:

Meaningfully exegete a selected passage or passages from the Book of Genesis.

Requirement options:

With reference to Genesis 4:1-16, Genesis 18:16-33 and Genesis 21:8-21, select and complete ***one*** of the following options:

1. Submit a detailed exegesis (1200-1500 words) of ***one*** of the passages from Genesis, with the focus on the main human relationship with God. A bibliography of at least four meaningful references is required.

2. Prepare and preach a 20-30 minute sermon, based on one of the passages from Genesis, which focuses on the main human relationship with God. The sermon will be preached to the rest of the class; while a copy of the learner's preparation and notes must be submitted on the day of preaching. Learners choosing this option will be allocated a preaching opportunity by the lecturer.

3. Prepare and lead a 20-30 minute interactive Bible Study, based on one of the passages from Genesis, which focuses on the main human relationship with God. The study will be lead with six other learners making up the group, and at a time allocated by the lecturer. Study notes must be provided to the group, while all preparation and study notes must be submitted to the lecturer.

4. Over three days, meditate for no less than one hour on the three passages from Genesis, and reflect on what each passage teaches about human

relationships with God. Over three further days, as a response, exercise the lessons learnt in any concrete and meaningful way. Record your meditations, lessons and responses in a journal of no less than sixteen A5 or eight A4 pages – submit the journal in your own legible handwriting.

Assessment criteria:

In completion of this requirement, the learner should ensure that they:

1. Properly respond to the assessment item as presented.
2. Meaningfully utilize the medium of presentation required, including technical demands.
3. Reflect an awareness of the key exegetical issues in the passage under consideration; except in option 4, where the emphasis is meditation on all three passages.
4. Understand the character and nature of the main human relationship with God in the passage under consideration.
5. Appropriately apply your findings to the contemporary setting: in option 1, using 200-300 words; in options 2-3, by means of meaningful contemporary application; and in option 4, to your own life.

APPENDIX L:
LEARNER RESPONSES TO THE REQUIREMENT 4 QUESTIONNAIRE

NOTE:

The sub-headings under each question indicate which option the learner had completed.

2. Which of the requirement options did you complete (see next page for full descriptions)?

- **A detailed exegesis** 7
- **A sermon** 4
- **A Bible Study** 1
- **A personal meditation** 7

3. Why did you choose the option that you completed?

A detailed exegesis

- "I wanted to do something familiar to finish the course off with."
- "It gave me chance to research more information from books and the other reason is that I am used to writing assignments in this way."
- "I first chose the sermon but ran out of time. The exegesis was my second choice."
- "I felt it was the option that I could explain the text fully."
- "I think it is the best for me, and I am familiar to it."
- "I felt most confident in completing the exegesis well."
- "I chose it because I understand it."

A sermon

- "I chose the sermon option just for the experience of preaching a *formal* sermon and develop my preaching."
- "Really felt comfortable with preaching. Also love to know your comment/evaluation of how I preach."
- "To enhance my preaching skill as a minister of the gospel."

- "Half of it was that it was a challenge and a learning process. Being aware that this isn't purely an opportunity to develop, I had also felt my preaching had improved to the point where I could do it."

A Bible Study

- "The story did help me revisit what I think of God's dealings with mankind."

A personal meditation

- "It seemed like the least amount of research heading into the last stretch of the year."
- "It appealed most to me and seemed to be something I would enjoy doing."
- "For it was a challenge to see what Scripture can do into my life at the now moment."
- "More reflective and allowed for personal interpretation."
- "Because it was something I enjoy to do. I find it very much a transformation (devotional) experience."
- "Because I wanted to look at each of the passages. I also felt that I could do this one better than the other choices."
- "I enjoy meditating on Scripture, and have been *too lazy* recently so it was a joy to have to sit with the Word."

4. Describe how you experienced of the option.

- **Very difficult** 0
- **Difficult** 4
- **Average** 13
- **Easy** 2
- **Very easy** 0

5. Explain why you experienced the option as indicated.

A detailed exegesis

- Average, “I am use to assignments, and the topic was dealt with in length in class (story of Cain).”
- Average, “Generally I enjoyed this option of exegesis. It opened my mind to think more on how kind and gracious God is.”
- Average, “Easier than writing an essay and I feel I got more out of it.”
- Average, “The text was easy to read and understand. It only took a fair amount of considerations to understand it well.”
- Average, “In most cases the Bible is silent with many issues you need look and research for information.”
- Average, “I have had some experience in exegesis so it is not new to me and I can work through the process. However, correctly interpreting God’s Word should never be thought of as easy.”
- Difficult, “The requirements were tricky for me. Or maybe I missed what you required.”

A sermon

- Average, “I say that I experienced it OK, not too difficult. I’d say the best way to describe my experience as challenging. Researching it, putting it together and presenting it since I don’t have preaching experience.”
- Easy, “I am convinced that my personal and primary purpose is to communicate God’s truth to his people. I have always loved preaching.”
- Easy, “I thought I don’t struggle with understanding the meaning of Scripture text.”
- Difficult, “Preaching is still a new(ish) thing to me. Doing technical exegesis is reasonably easy, yet structuring it in a sermon w[ith] practical application is a little more challenging.”

A Bible Study

- Difficult, “It required thinking and doing proper exegesis.”

A personal meditation

- Average, “Some passages I struggled to come to grips with.”
- Average, “I found that I had to put in as much effort into this assignment as any other, it wasn’t easy to do though, but provided something different to do.”
- Average, “Had a basic idea what to do.”
- Average, no comment.
- Average, “Because it was not always easy to apply lessons learnt in concrete life affairs.”
- Difficult, “I did not really know if I was going deep enough.”
- Average, “I really enjoy engaging with the Word and seeking what the Lord will say to me, especially about my relationship with him.”

6. Explain why you did not choose one of the other options.

A detailed exegesis

- “The other options looked very interesting, but I didn’t want to chance them on my last requirement.”
- “I didn’t choose the others because I could not know how to do them in a technical way.”
- “I did but did not have time to complete it as it had to be done sooner.”
- “I felt more confident with the option chosen.”
- “They are not good for me and I am not familiar with them.”
- “I thought of choosing the sermon but was not sure of what day I would’ve been allocated and looking at my timetable for the semester though it best to do exegesis.”
- “The option I have chosen, I understand it and I like it. I did not choose others because I feel what I’ve chosen is what suits me.”

A sermon

- No comment.
- “A detailed exegesis would have been OK, if there were no option for preaching. Preaching became more comfortable and require less time for me personally.”

- "I fear to fails BBS because it is crucial to my future ministry."
- "I wanted to preach."

A Bible Study

- I was comfortable with option three."

A personal meditation

- "All seemed so formal and would require a lot of prep."
- "I had done similar assignments previously in the course and this option appealed most to me."
- "For the other ones we do through our studies at the College."
- "They did not appeal to my thinking and what I think I would naturally retain as information when doing this work."
- "I did not choose one of the others because I often do them in my life, I wanted another kind of exercise I also enjoy."
- "Because I though I would do better in the one I did."
- "I am still working on my sermon presentation, the detailed exegesis & Bible Study simply didn't appeal 2 me as much. It would be intimidating to lead a study to those who are likely to have as much if not possibly more insight than yourself."

7. What changes would you make to the options, if any?

A detailed exegesis

- "Nothing really."
- "No changes to make at all."
- "None."
- "No changes really."
- "No."
- "None I can think of."
- "In future maybe I will choose the 2nd option [a sermon]."

A sermon

- No comment.

- “Maybe suggest the student are allowed to choose the preaching passage within Genesis themselves.”
- “I would have chosen Bible Study which is more engaging where I see more of my gifting.”
- No comment.

A Bible Study

- “Allocate 45 minutes to this Bible Study. Also number of Bible Study participants to be at least 9.”

A personal meditation

- “Number of pages if typed on computer should be less because of the format.”
- “I can’t think of any.”
- “None.”
- “None.”
- “I do not find any.”
- “Making sure all 3 passages are correct. It was frustrating to have started Gen. 21:8-21 and later find out it was not meant to be that passage.”
- “None. The range is good.”

APPENDIX M:
LEARNER RESPONSES TO THE FINAL QUESTIONNAIRE

2. In the space provided below, kindly reflect on your experience of the course, with particular reference to the approach to assessment.

"My experience for this course in reference to the approach to assessment has been good. I have liked it because I was given a chance to do the course in the way I could do it better than doing the course in the way you are not used. The approach of writing an assignment which I took has made me discover more things through research. And if I was forced to do drama or art I could hardly do it. But this approach made me enjoy the course and know more things through research."

"The course material and outlines were useful, giving us what is important and not getting lost in side issues. The fresh approach to assessment was great as I feel that previous methods of assessment appeal to certain people but not to others. Although I am not natural drawn to fine arts I like the fact that tertiary education can allow those people to learn through a medium they are comfortable with. The main aspect I like at this form of assessment is that focus on certain issues require you to produce a technically sound assignment, the problem is that you rarely (if ever) remember the technicallities [sic] in an assignment whereas some of these approaches were less worried about technicalities than getting core concepts and reflecting on them. Often assignments that require other sources etc mean that people can paraphrase other people's thinking without actually grasping core concepts whereas this method it is much easier to evaluate if one has caught the main concept. In all of my critiques my one difficulty has only been that of expectation, because we had not done it before we were not familiar with the mediums and so were uncertain of the technical requirements of some of them!"

"The course is interesting because as a preacher it will help me to know my Bible. The Old Testament is exciting but lack of interest in the past make me struggle yet overall it is a journey I enjoy. I even contemplate doing a deeper work in Old Testament."

"Well, I really enjoyed the fact that we had various options of completing assessment. I feel that the *old* way of assessments favoured more those who are academics than those who aren't, so this *new* way of assessment gives for instance those who are creative an opportunity to express themselves without using literature. But ironically I think that all the new options require more work than the traditional way of assignments, because they require that one not only understand the material but be able to reapply it to suit the chosen medium of assessment. Another thing that I think needs to be addressed here or at least considered is that some of the new assessment requires that the student spend a bit of money in order to complete them, this may not always be easy considering some of the students financial situations. But overall I am very pleased with this new approach and I am looking forward to see it implemented for all the courses."

"I found this course to be such a blessing. My assessment requirements enabled me to explore different aspects of myself and enabled me to learn my material in an easier way that was more compatible with my personality. The course gave me flexibility and options to fullfill [sic] my requirements and made the material real and applicable to my life. One of the assessment requirements gave me opportunity to teach the Pentateuch to my best friend, which led to his personal commitment Jesus Christ. Had Dr de Jongh not being doing his doctorate, I doubt that I would have had a similar chance or opportunity."

"I really enjoyed this new approach to doing assignments and this course. I felt that I was able to experience new things and I felt that I was able to explore new grounds. Thank you so much for this opportunity I really enjoyed."

"I personally enjoyed the course. The approach to assessment was new to me as an experience. I enjoyed the freedom that was given to us to choose the required option more suitable to us. But I found an experience on limitation on the options to choose from. In one particular assignment, I did not find an honest option but it stretched me through to explore new things. I wish we can adopt the approach for most of courses in college. It helps us do things differently and more efficiently according each one's expression of thought through a particular method or option."

“I am not very good at writing assignments and have appreciated to have more than one way of testing my knowledge on the subject. I feel I am a more creative person and by setting out assiments [sic] in different ways I felt I could express my gifts more affectively and use what God has given me to reflect my understanding of the subject. This has been a good experience and I do feel that it has been of benifet [sic] to me and should be used more in colleges to test students understanding of subjects.”

“Due to the fact that we could select if we wanted to do exams was the highlight of the whole course. The assessment could have asked more reflection questions.”

“I found the course to be enjoyable and different to the other semester courses. It differed because we had a lot more freedom and choice when it came to doing assignments, the options we had to choose from provided a fresh, interesting way of completing the course and learning what was necessary to complete the course. The way in which the class is being assessed I think is different, fair, and sufficient enough for students to get all they hoped out of the course. I think the way in which we are being assessed has encouraged the students to put much consideration and effort into their assignments.”

“As long as the learner grasps the ideas in each requirement, then all is well. I at times could not use my brains to the full fearing I’m going to hit the wrong target. So I stayed in the *box* very much. I couldn’t also fully (reasonably) understand the lecturer’s gramma [sic] in his instructions. I blame myself for not intellecting [sic] so I get clarification. This way of doing a course gives much freedom to the learner as long as the learner grasps the requirements. The options helped me discover that I can do other good things I have never done before. Course has helped me change my understanding on some issues in a positive way. Thank you for this course.”

“I feel that the course was very different to what I am used to. It did however cater for different approaches to learning and expression of thoughts. The options covered a wide area of learning from analytical thinkers to the arty types, but I did

however feel slightly limited as to what approaches I felt I could do with integrity and to an acceptable level of performance."

"I thoroughly enjoyed this course! It brought the Pentateuch to life for me. I have such a new appreciation for the times and how the Pentateuch came about. I know that it is not the common occurance [sic] but in my view some concern came up in the fact that a student who wrote the test got 92% and for instance an artwork would not receive that high a mark. So maybe a review on where one is given the opportunity to write a test should be done. It was a wonderful experience and I thoroughly enjoyed all that I learnt. I believe this is the first course that has really impacted my relationship with God in causing my relationship with God to grow and become richer. Thank you for a great semester and class."

"I must say that I have and always have enjoyed the course (and the lecturer's dynamic style). But this approach to assessment is really really good. It allows us to be more creative and comfortable with any option taken. Personally, putting the course in segment was really helpful. So one can concentrate on one segment at a time. This enables one to put in maximum input at one's best. Also the options allowed us to have time to concentrate on other courses. Overall, this approach to assessment presents the course less complicated and easy. I reckon it's wonderful. Thanks."

"I have enjoyed the course although not easy for me but not putting blame to you as a lecturer. At the beginning things were not good for me at all but as the time goes on I was gaining interest on the course and understanding. There were some places where the questions were not too clear and that will make you wonder how to answer the question. In regard of options, it makes us feel comfortable to choos [sic] which one fits you although other options you will interested but through lack of resources lack of skills, but all in all I have enjoyed the course."

"Upon hearing of the different approach to assessment that was going to be taken on the course, I felt both excited and a little weary. I was excited because of the

new opportunities being presented, I see some of my gifting in the area of creative arts so I was keen to explore this further and express my learning in this way. This part of the assessment I really enjoyed and believe I took full advantage of. I felt inspired, freed, encouraged and challenged. I was a little weary [sic] because of the *unknown* factor. I felt unsure as to how the *different* ways of assessment would be evaluated. There was some risk involved in choosing *newer* options, and stepping away from the *stereotypical* options that I felt confident in. The reason I was able to take the risk in most of the assignments was the fact that I was confident in my ability in those areas, I enjoy challenges, I am not afraid to take a chance, and very importantly I felt confident in the lecturers ability to be fair and open in the assessment process. Thank you Dr Charles for a great course and for giving me the opportunity to grow and learn on another level. I have really enjoyed it and will appreciate and cherish this experience for a long time. All the best for you thesis."

"I enjoy the *course* but somewhere somehow the requirements of the course assignments tricked me or maybe I missed the point. My major problem is that I never thought that I would experience difficulties with the options I have chosen. I wish I could have a format for your assignments because sometimes what I put in my assignment is not what you require. My suggestion is that in future or for others who will be doing the course, please give clarity to what you require."

"To be 100% honest, I wasn't too perturbed or excited either way. I generally tend to just do what has been set before me & try & enjoy or do well at whatever is set before me. So, having said that, I enjoyed the assignments & the preach."

"The lectures were well structured and taught. Some of the lectures we just went through the text in groups, partly I think that was good, yet in some ways it would perhaps have been good to have as *home work* and say one actual lecture we were given off, then we could come together 2 discuss the following lecture. The assignments. The variety was good once I got to grips with it. Initially it was a bit of a shock as it was so different, but after the start the calm proved to have been great. I would have incl more options for the practical person opposed to the

artistic person! This would have catered more for people like myself who are left brain, task orientated!”